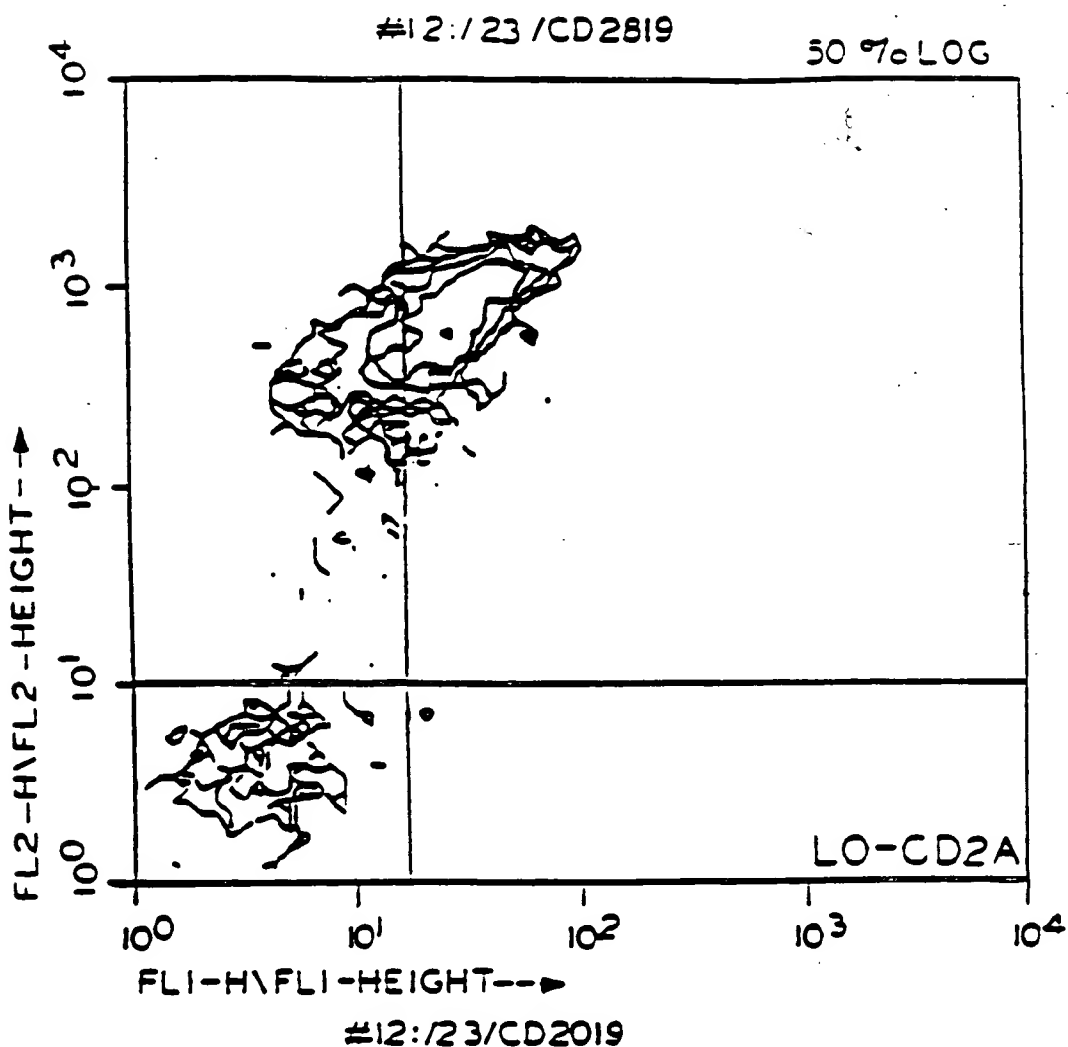


5951983

FIG 08/477989



--- QUAD STATS ---

FILE: #12:/23/CD2019 SAMPLE: 039

DATE: 9/24/92 GATE G1-R1

PARMETER: FL1-H\ (LOG) FL2-H (LOG) QUAD LOCATION: 17.13.9

TOTAL= 5000 GATED= 1290

QUAD EVENTS % GATED % TOTAL X MEAN Y MEAN

IUL	299	23.18	3.98	11.41	284.69
2UR	831	65.97	17.02	32.70	630.65
3LL	135	10.47	2.70	4.08	3.31
4LR	5	0.39	0.10	25.11	6.54

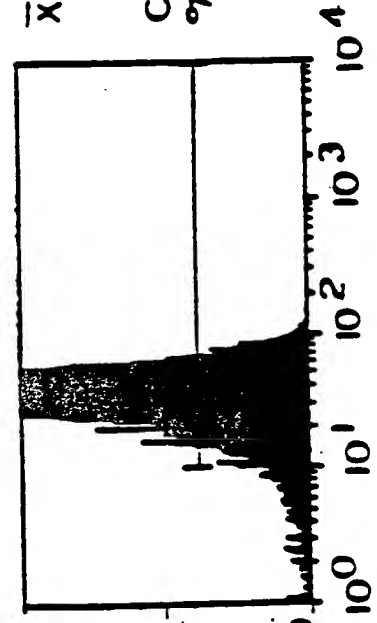
ACO CMD INST-CTRL GATES FORMAT PROTO SAVE

ACQUIRE

BEGIN
FINISH
ABORT
RESTART

ZOOM 128

TYPE
GI
DOTS
RGN
STAT



$\bar{X} = 387.6$   
32.7  
CU = 13.3  
%o = 91.8

ACQ MODES

ALL CELLS
-----------

TOTAL  
18,980

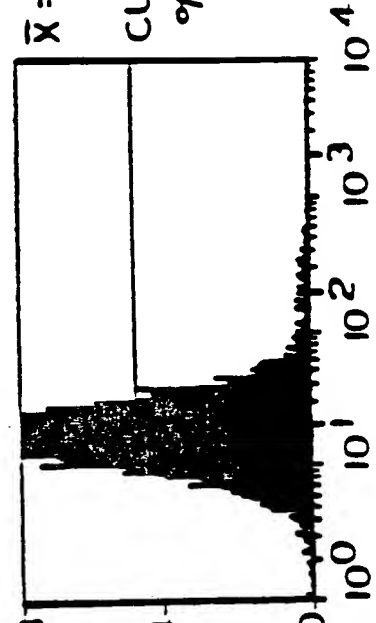
TOTAL RATE  
0

ACCEPT

ELAPSED TIME  
00:00:48

ZOOM 128

TYPE
GI
DOTS
RGN
STAT



$\bar{X} = 342.1$   
21.7  
CU = 19.4  
%o = 79.1

FIG. 2A

ACQ CMD INST-CTRL GATES FORMAT PROTO SAVE

ACQUIRE

BEGIN

FINISH

ABORT

RESTART

ZOOM 128

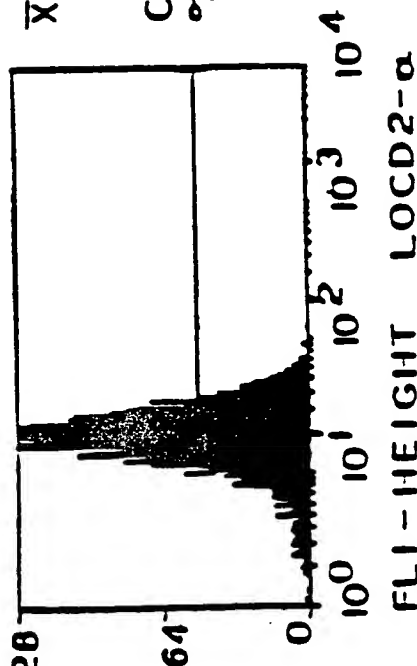
TYPE

GI

DOTS

RGN

STAT



$\bar{X} = 337.1$   
 $CU = 12.8$   
 $\sigma = 84.7$

FIG. 2B

ACQ MODES

ALL CELLS

TOTAL

13,740

TOTAL RATE

0

ACCEPT

13,740

ELAPSED TIME

00:00:35

ZOOM 128

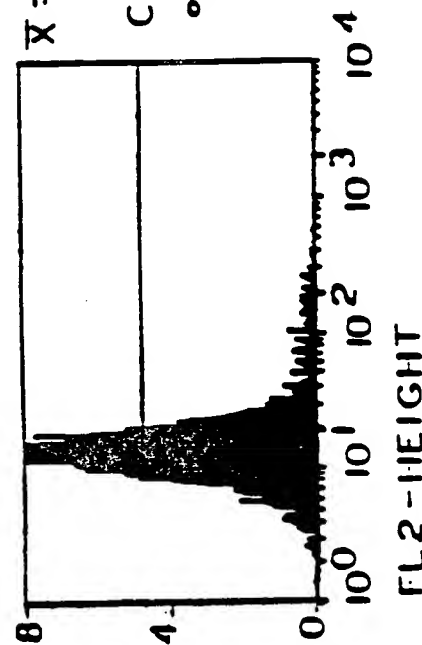
TYPE

GI

DOTS

RGN

STAT



$\bar{X} = 326.8$   
 $CU = 21.5$   
 $\sigma = 68.6$

Leu5-b

FIG. 3B

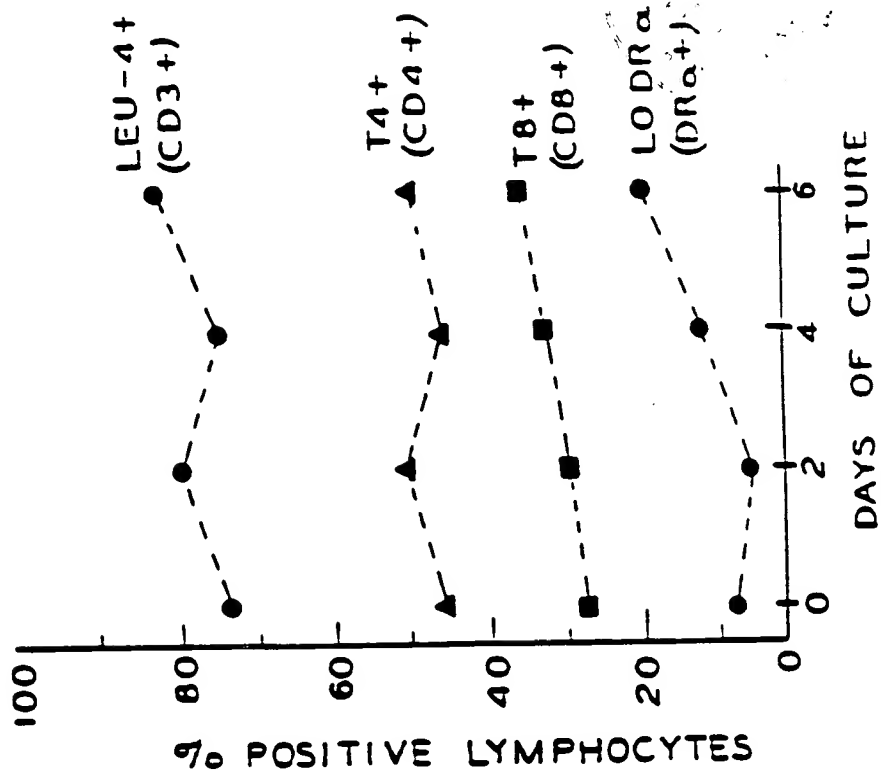
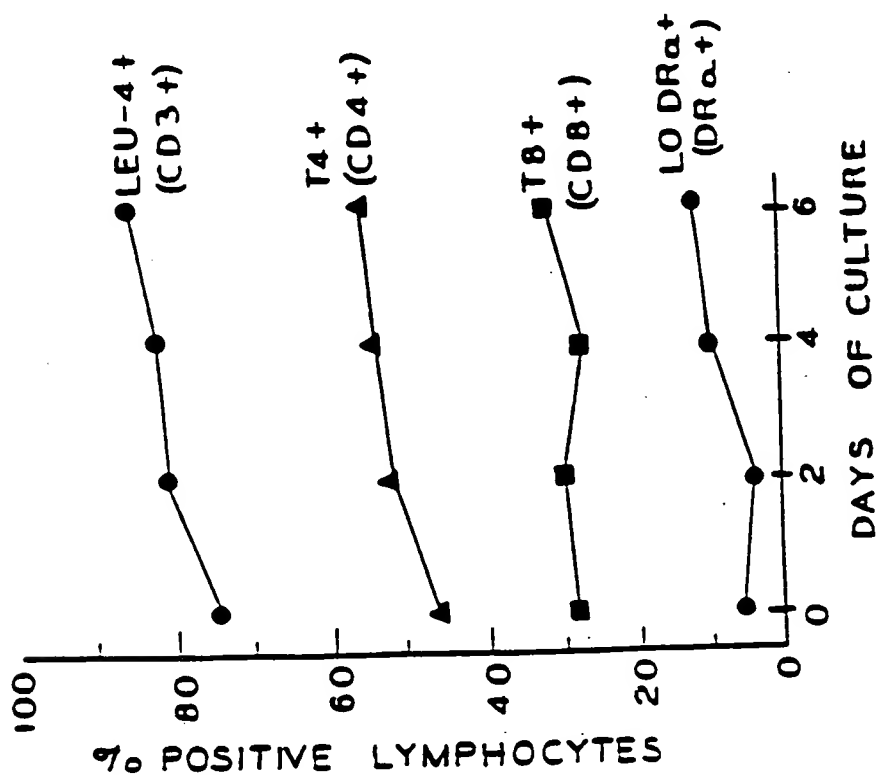
PBMC WITH LO-CD2- $\alpha$ 

FIG. 3A

PBMC WITHOUT LO-CD2- $\alpha$ 

## Percentage of Positive Cells

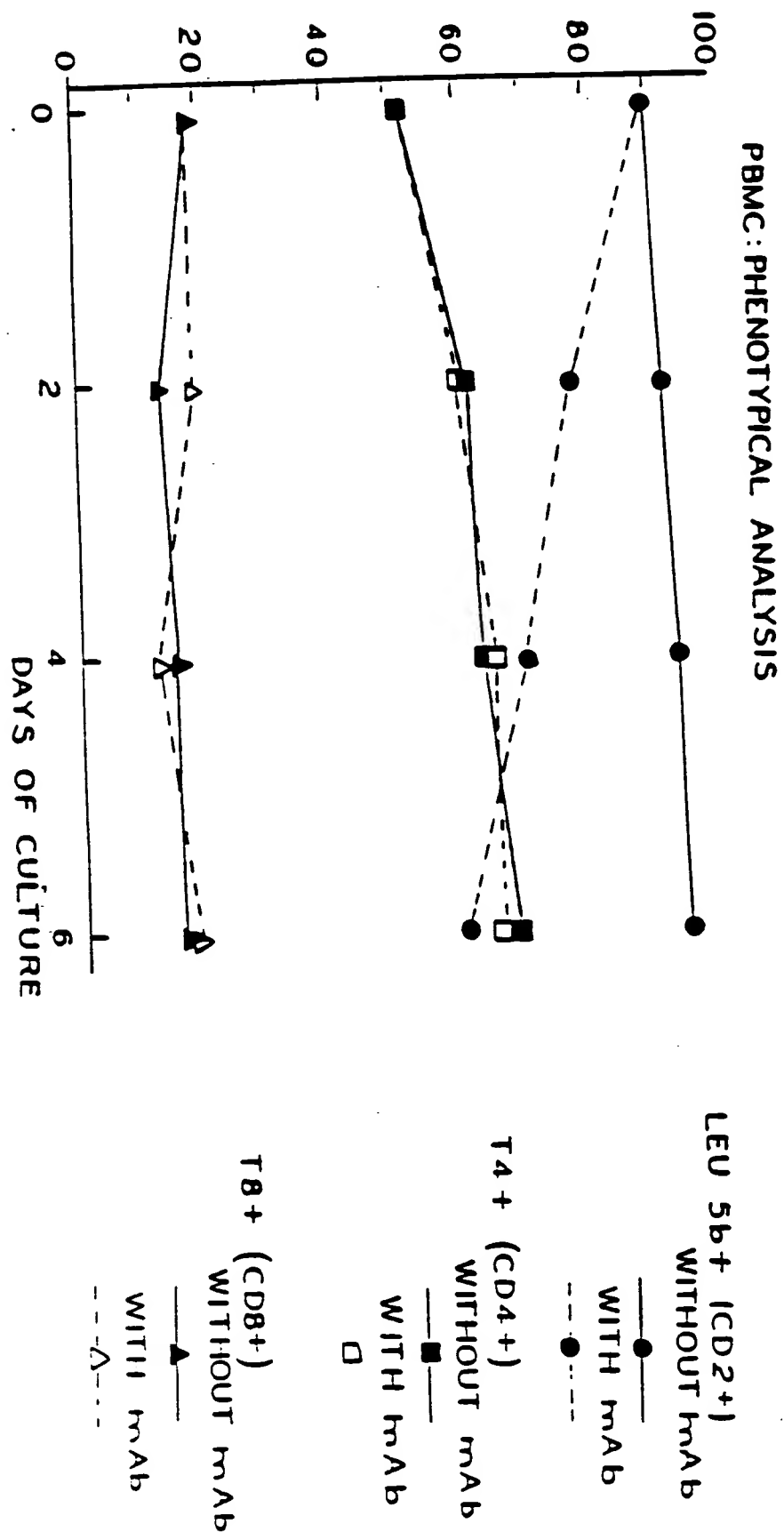
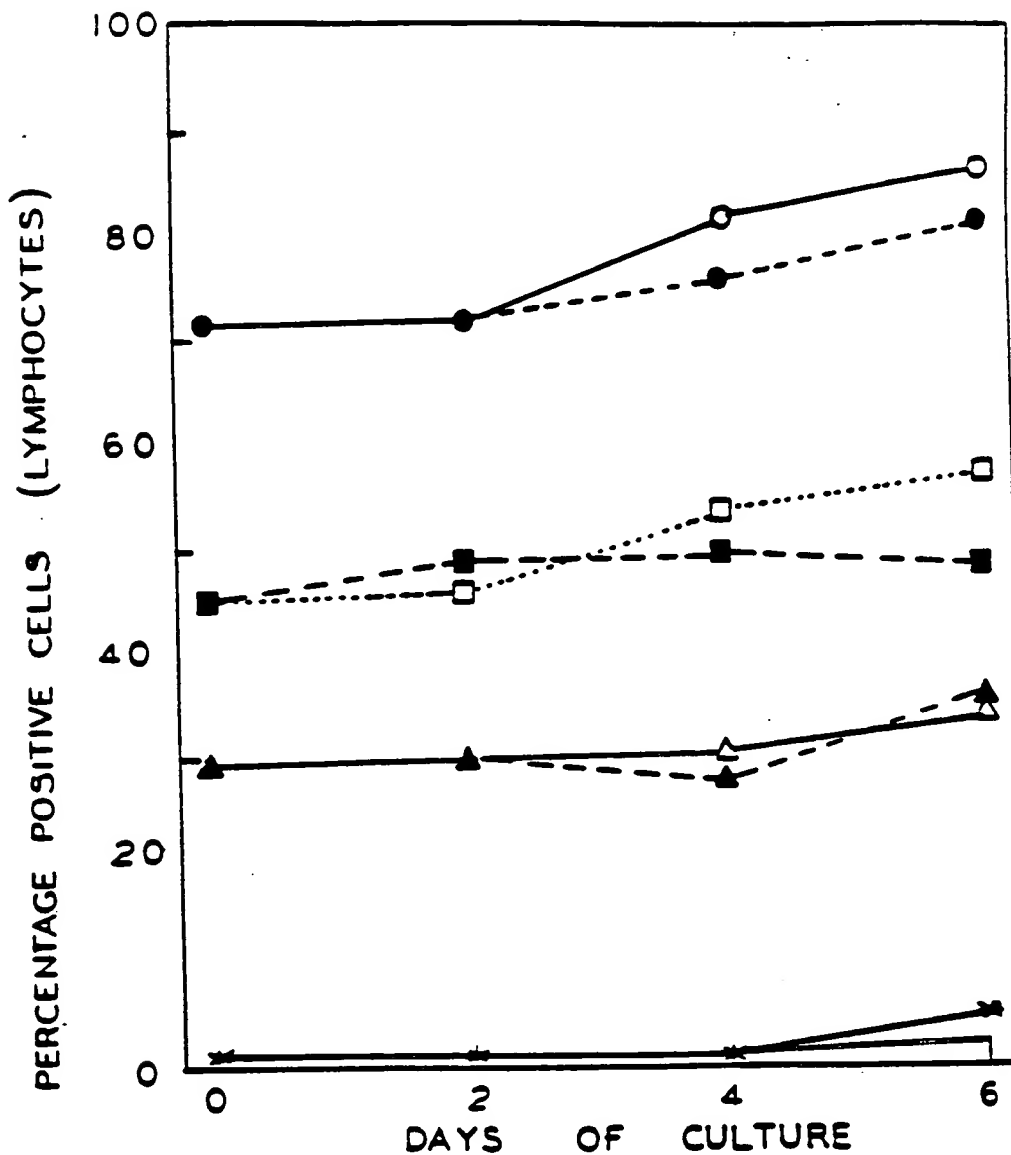


FIG. 4

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# Effects of LO-CD2a on Resting Cells during MLC



CD3+ (-MoAb)    CD3+ (-MoAb)    CD4+ (-MoAb)    CD4+ (-MoAb)  
 —○—    ---●---    ---□---    ---■---  
 CD8+ (-MoAb)    CD8+ (+MoAb)    CD25+ (-MoAb)    CD25+ (+MoAb)  
 —△—    ---▲---    —\*—    —\*—

FIG. 8A

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FIG. 5B

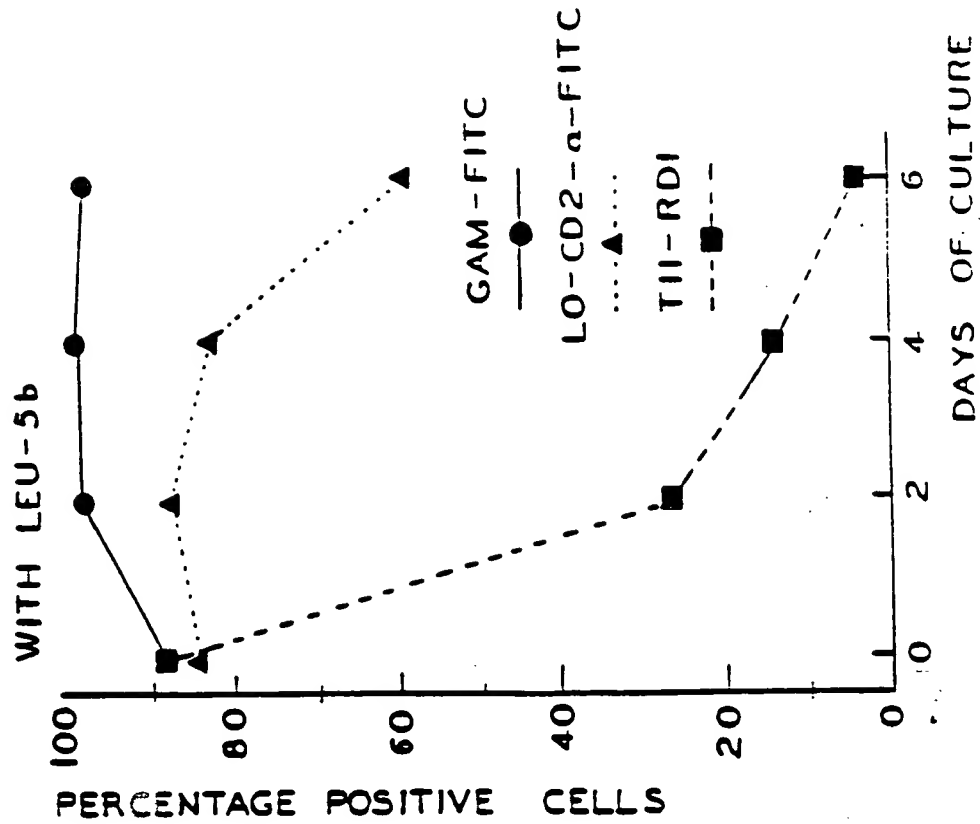
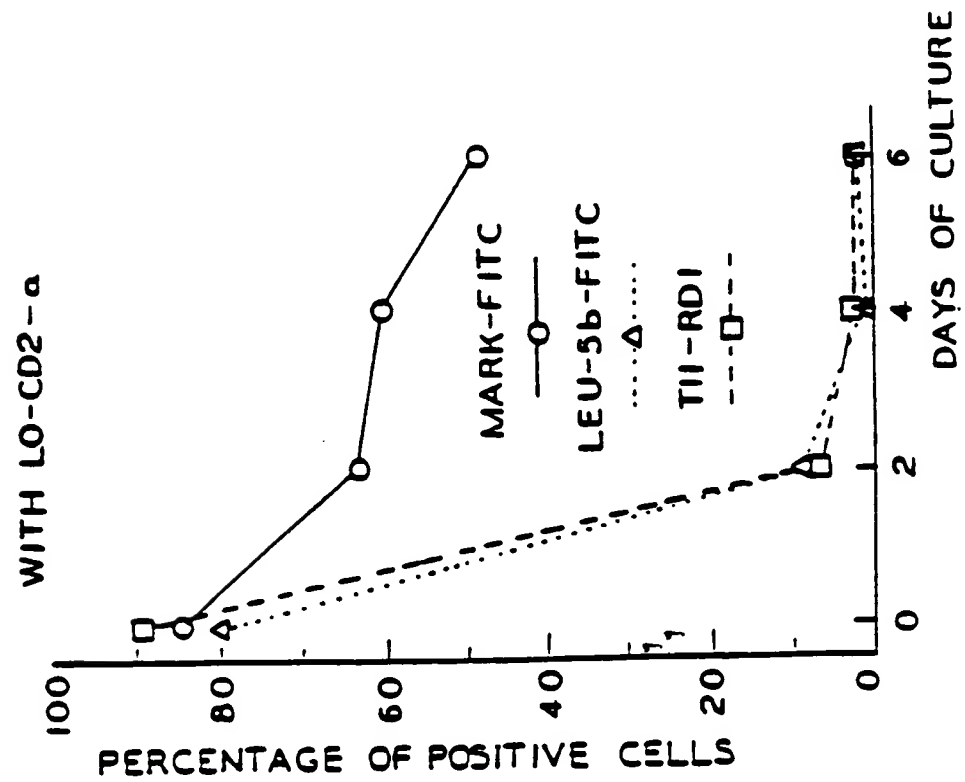


FIG. 5A



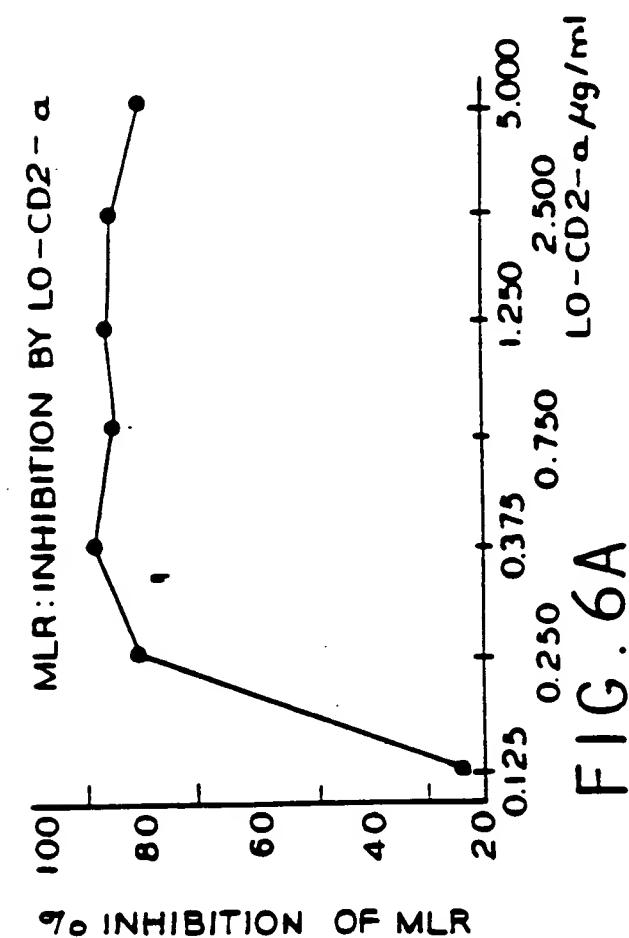


FIG. 6A

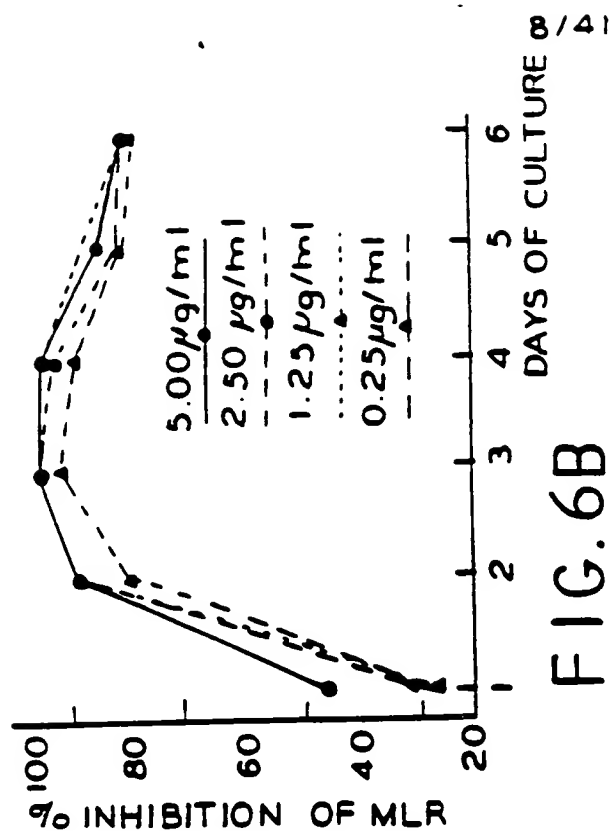


FIG. 6B

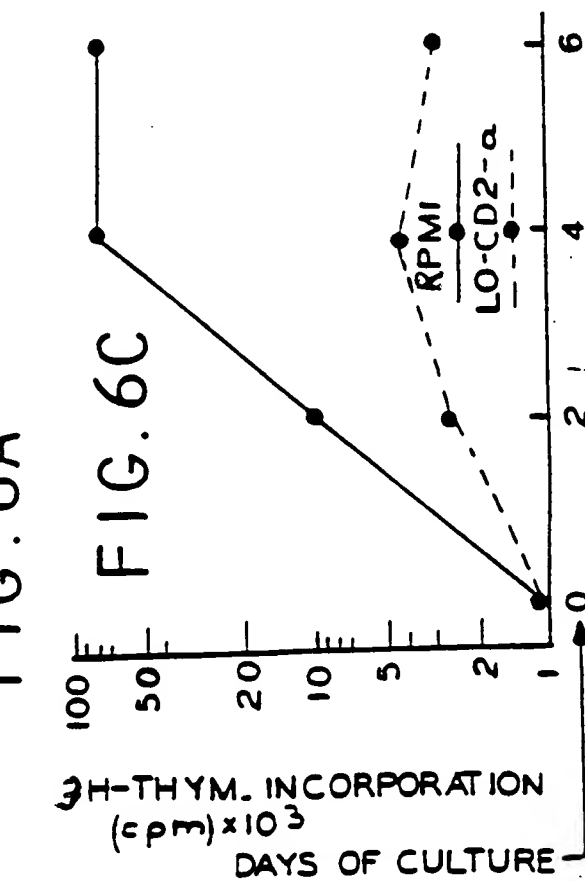


FIG. 6C

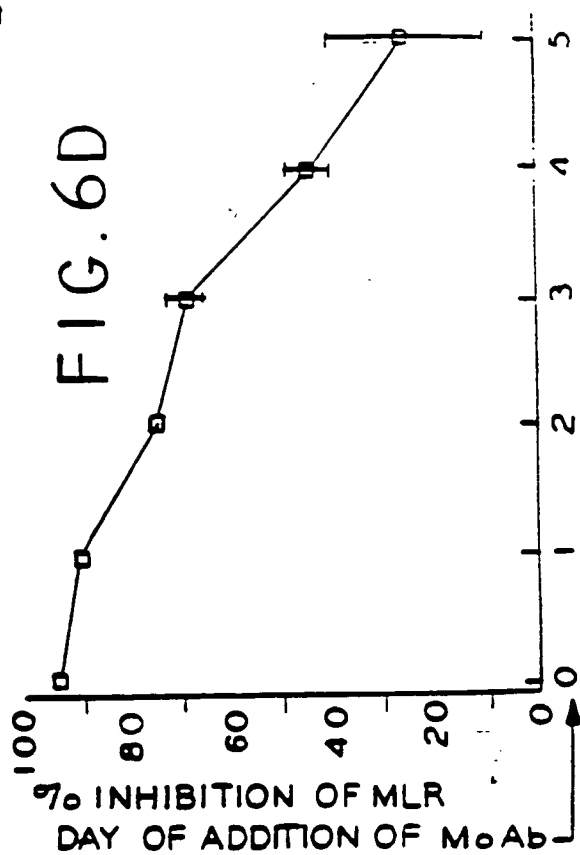


FIG. 6D



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MLC: LEU-5b+ (CD2+) CELLS

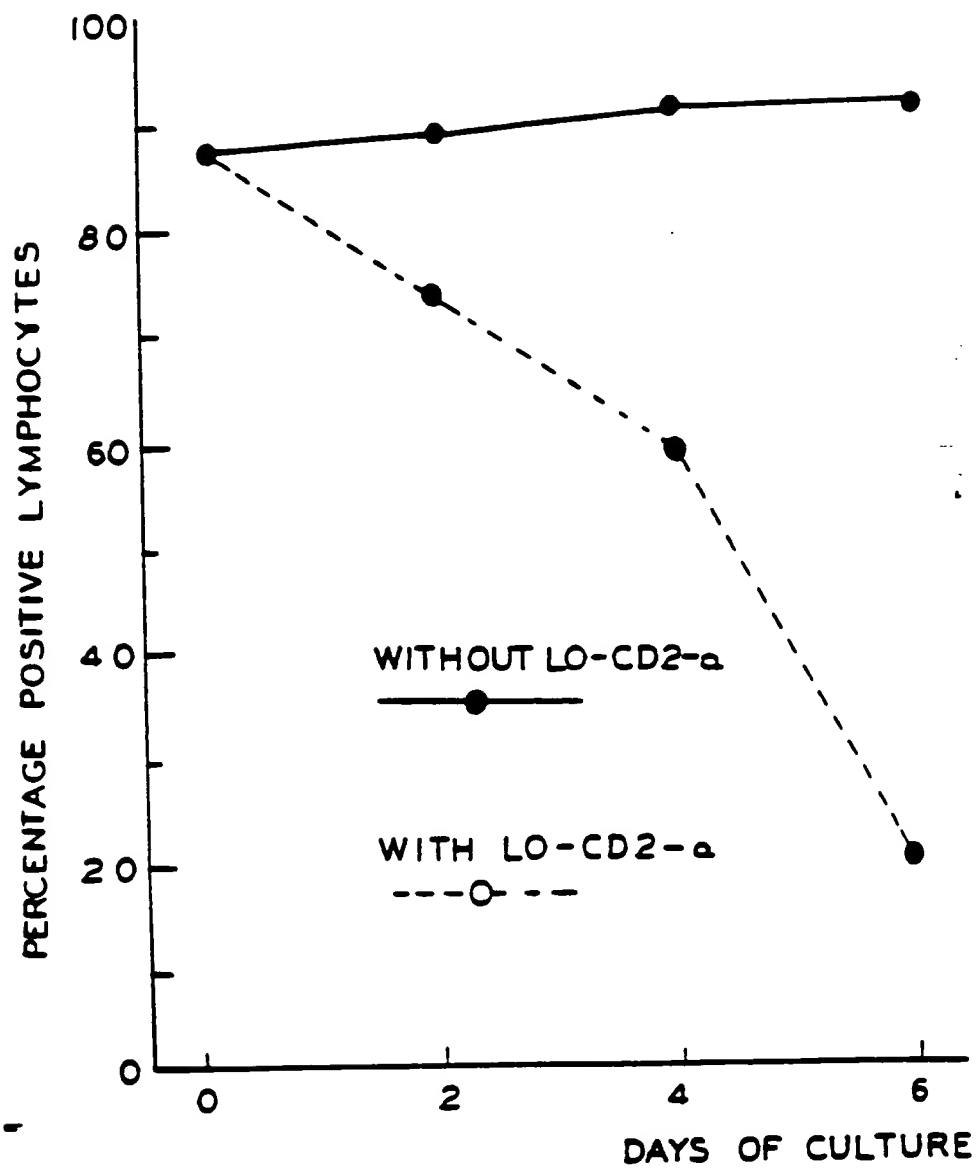


FIG. 8B

Number of blast cells per 25,000 events analyzed

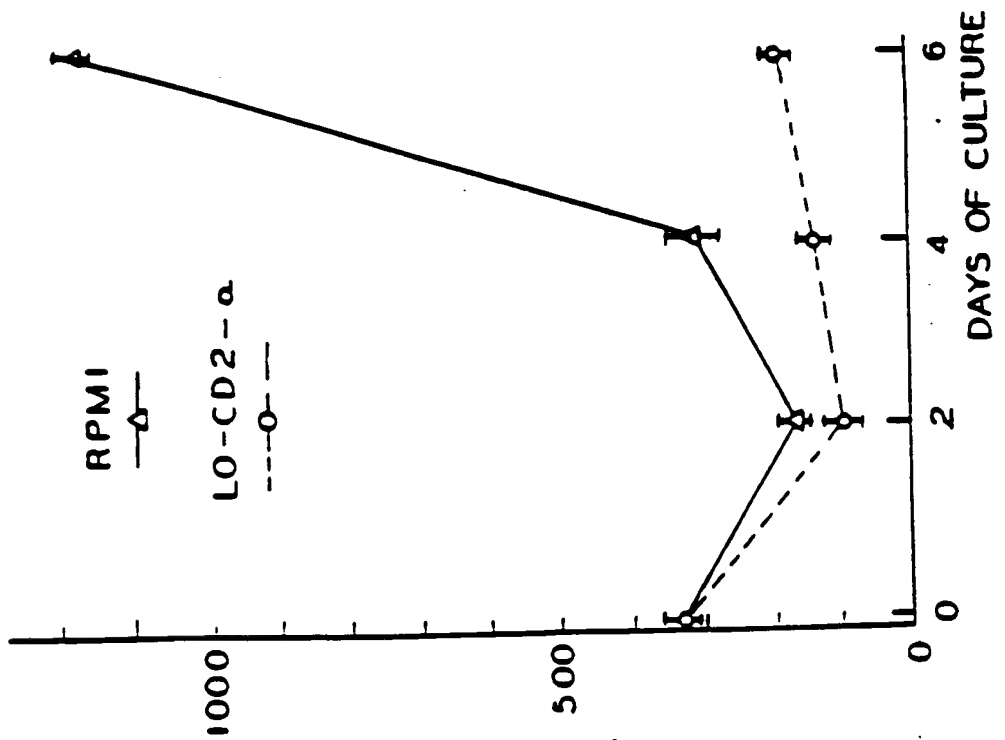


FIG. 7

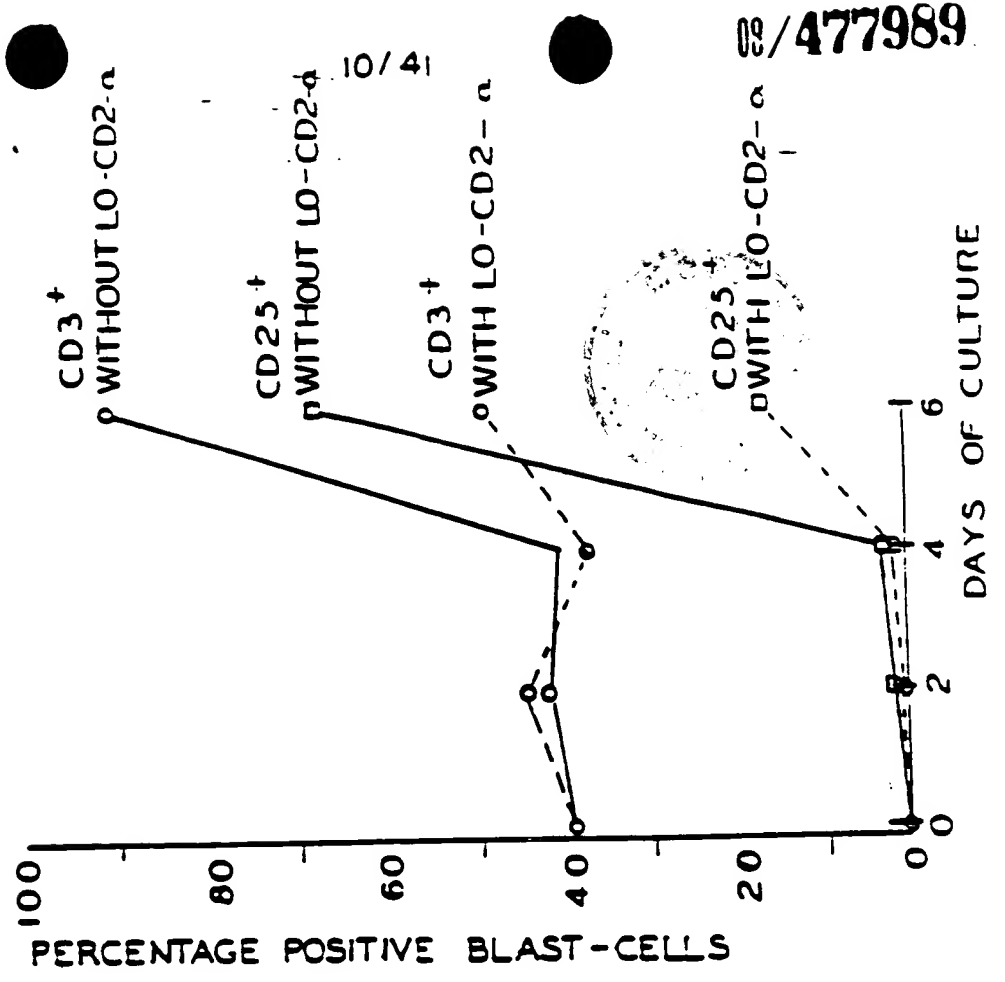
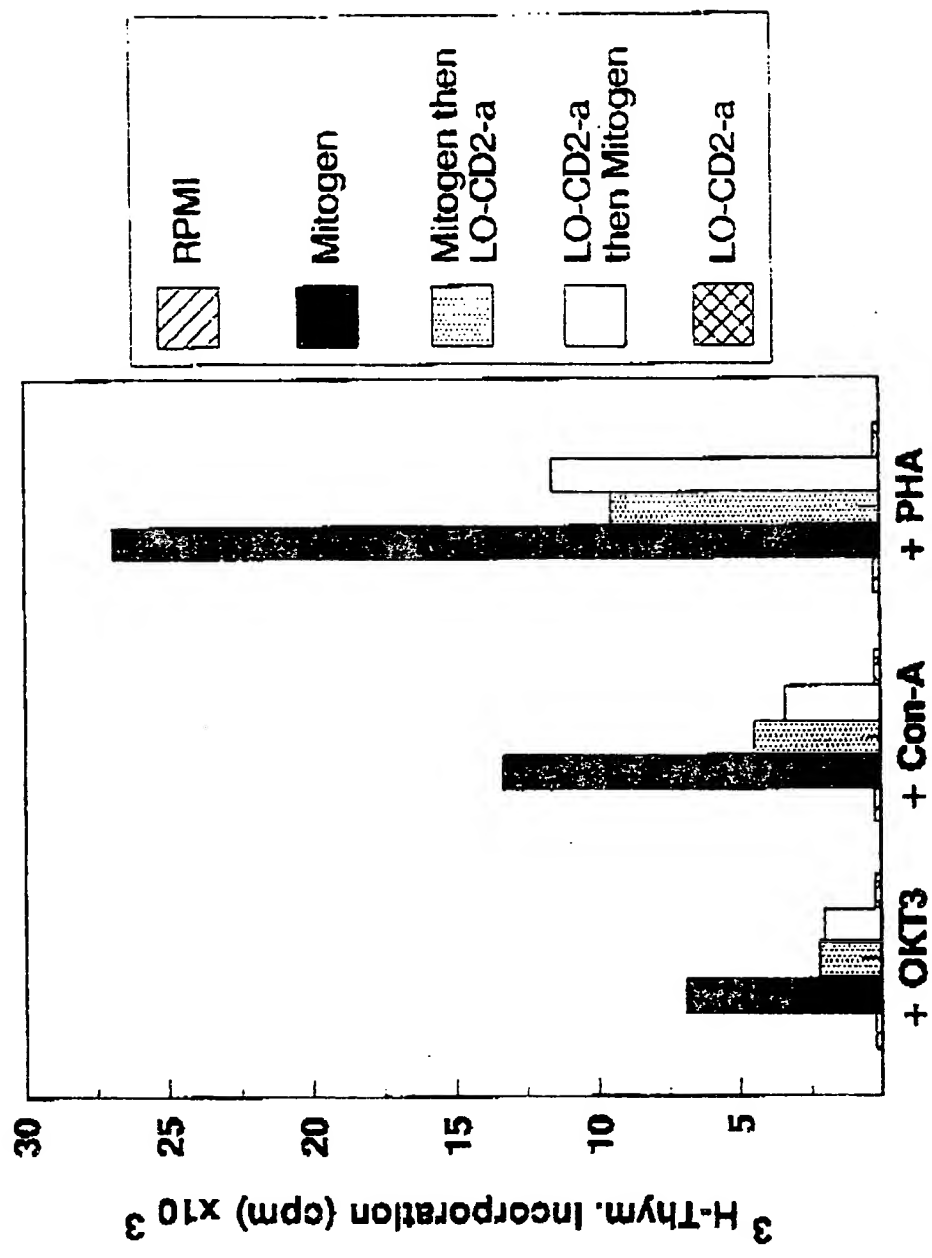
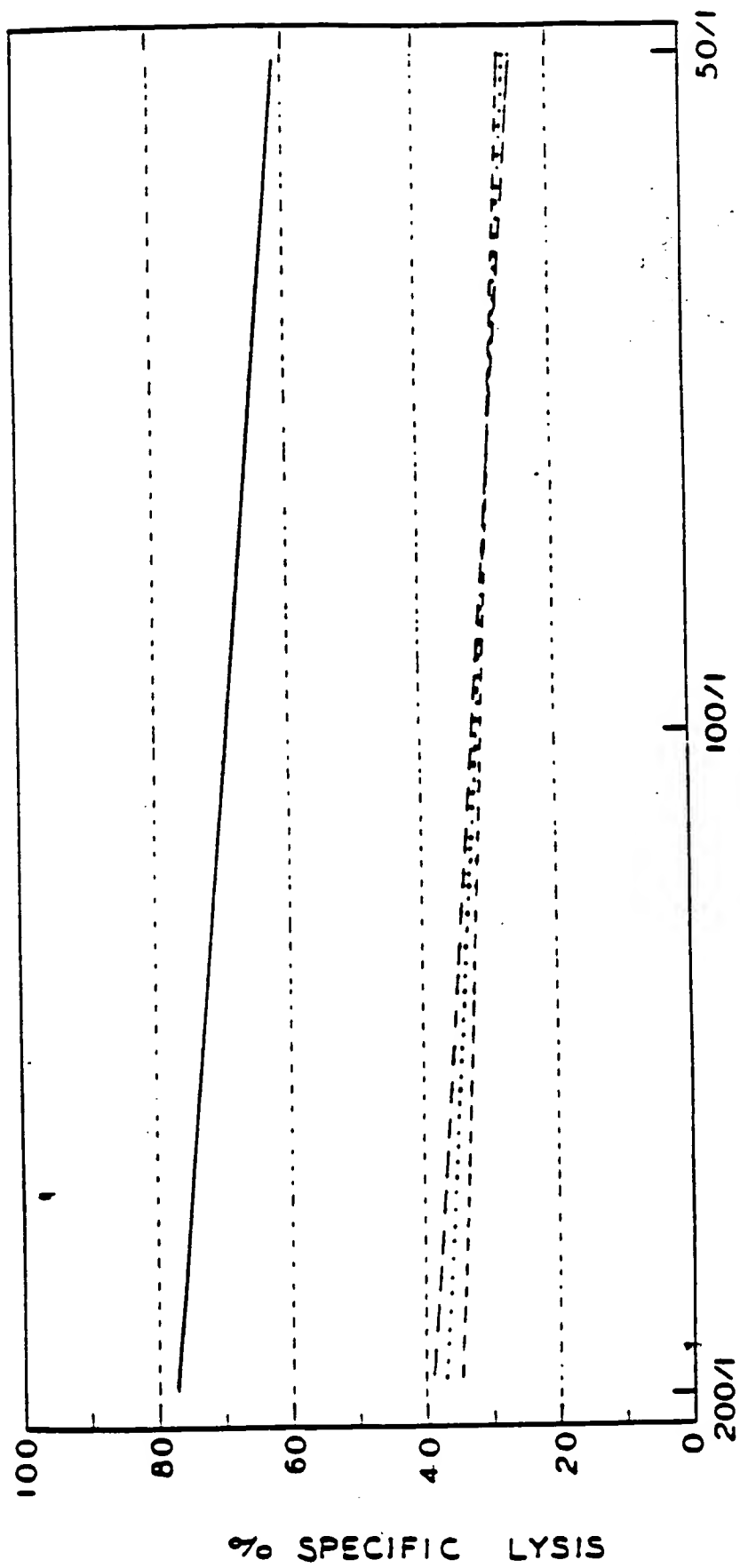


Figure 9

# Effects of LO-CD2-a on mitogen-stimulated PBMC





FIC. 11 d

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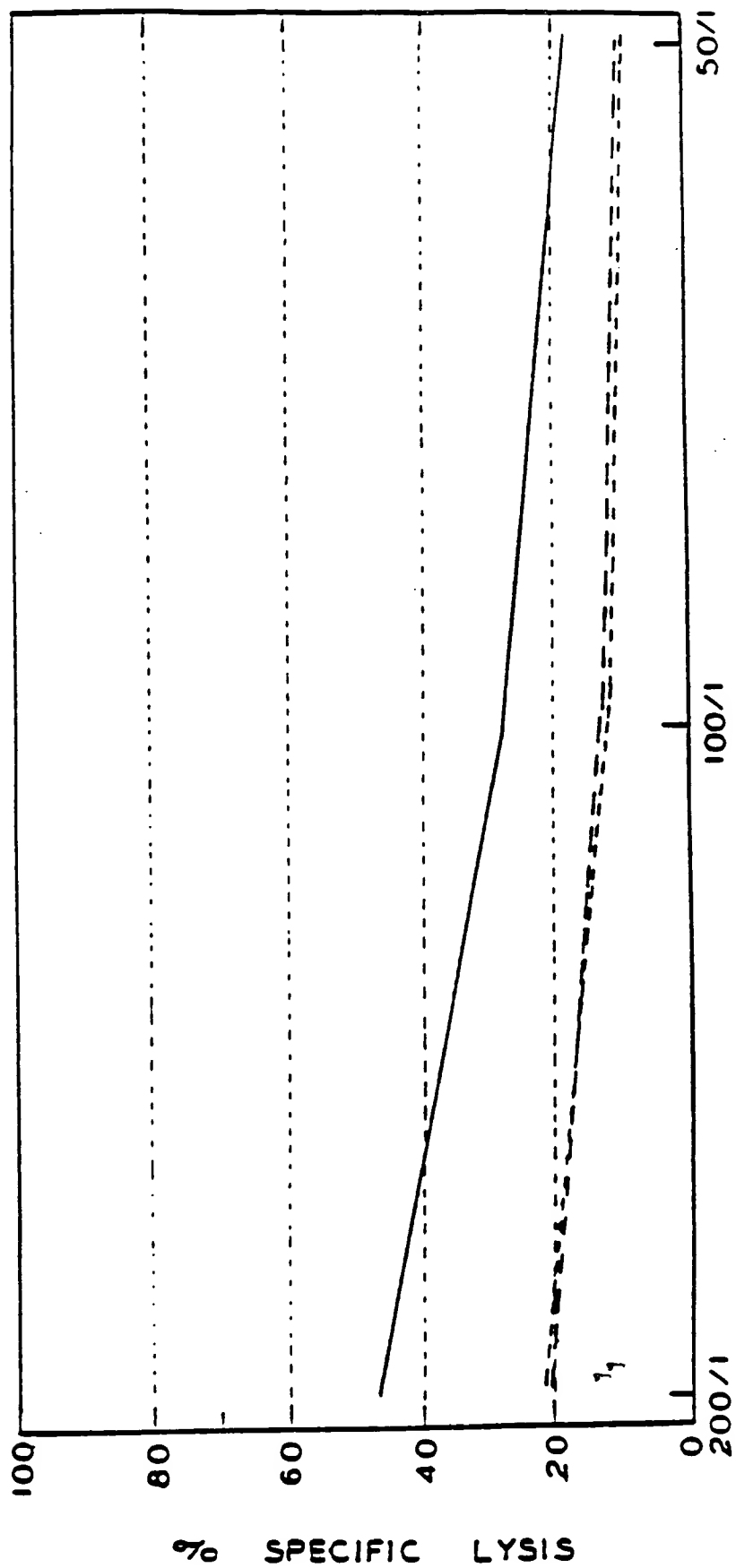


FIG. 11b

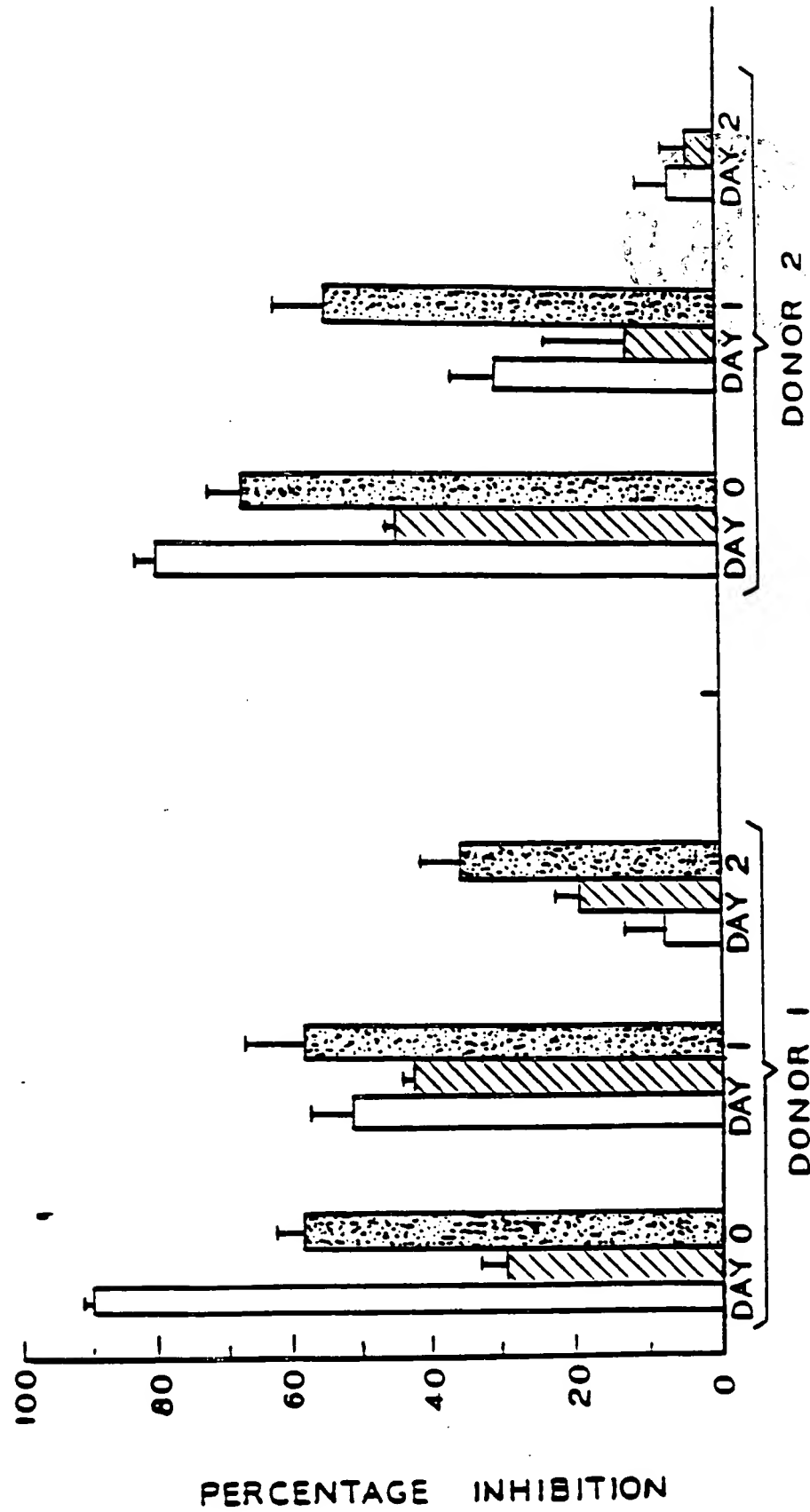


FIG. 10

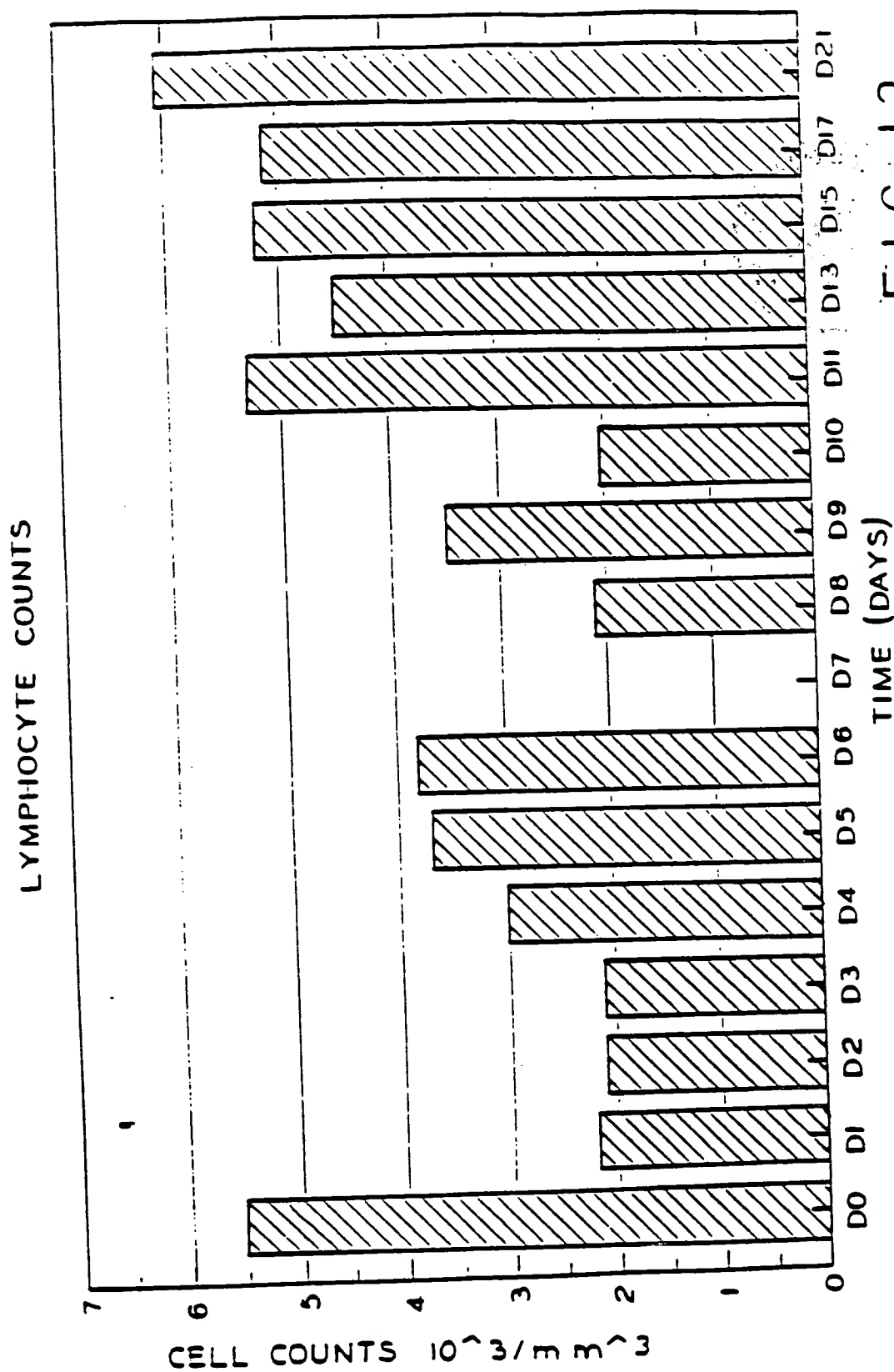
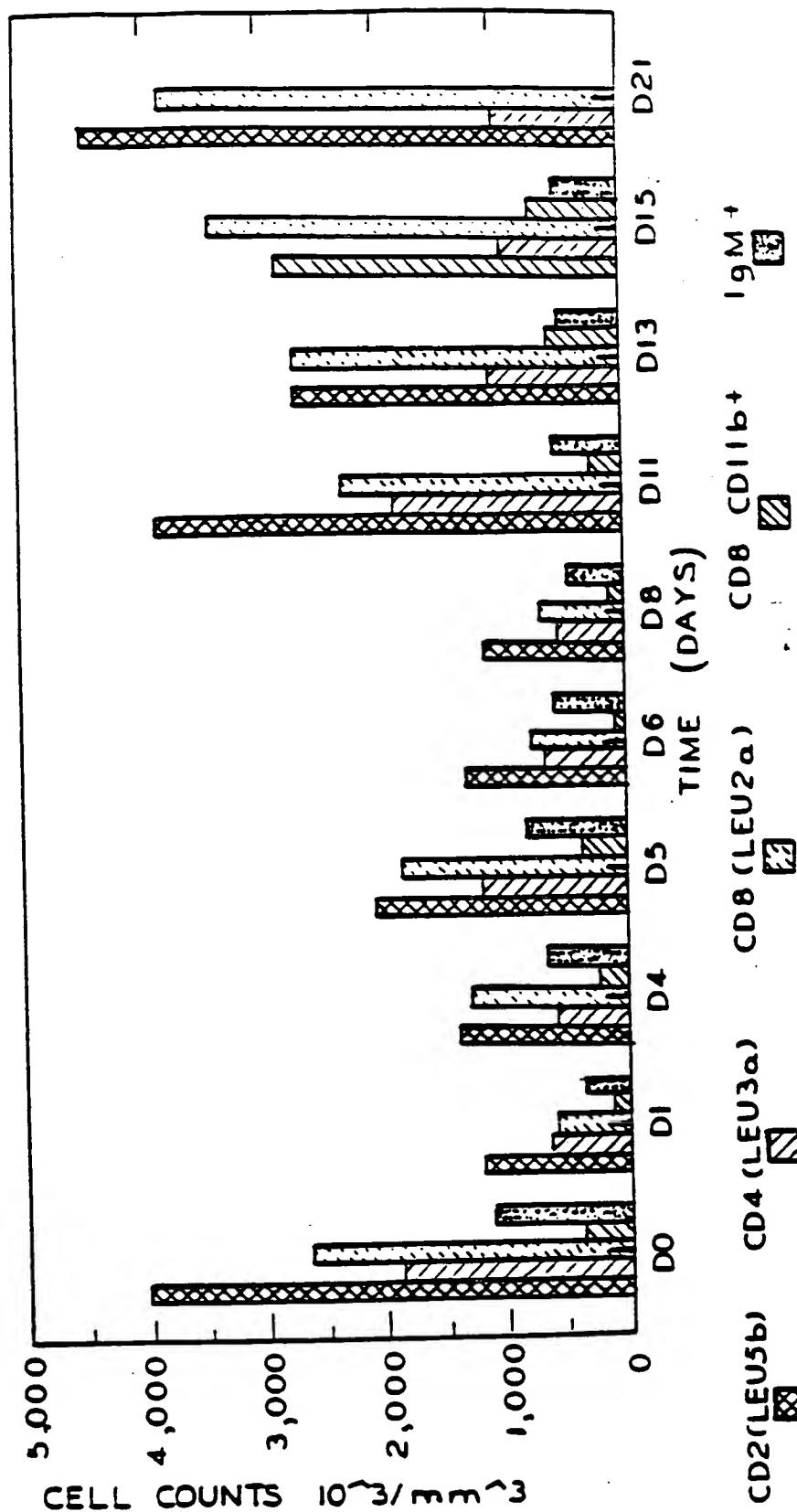


FIG. 12

LOCD2 20mg/DAY.  
D0-D9

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CELL POPULATIONS FIG. 13  
 LOCD2: 20 mg/DAY  
 D0-D9



IgM+ : B CELLS  
 CD8+CD11b+ : NK CELLS

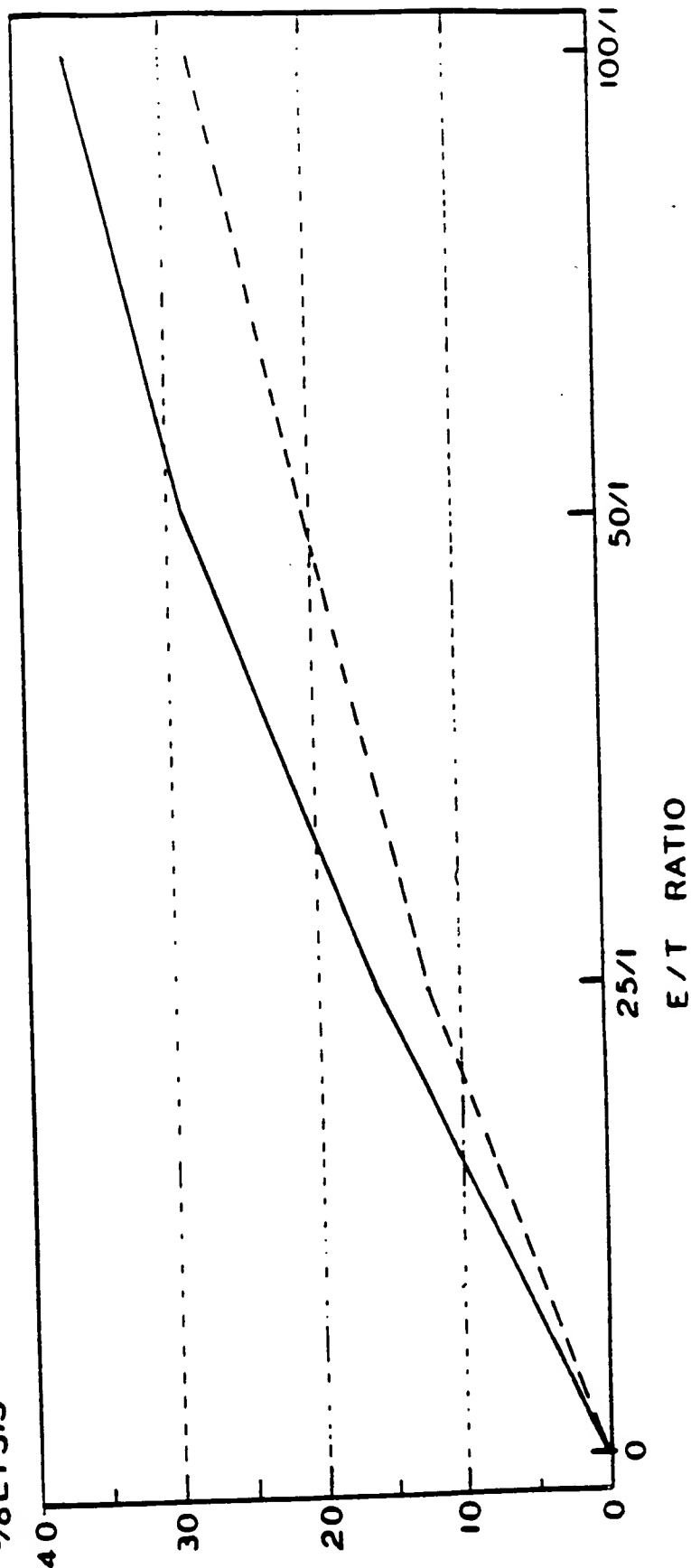


FIG. 14

NK ACTIVITY

MONKEY #1992 AFTER LOCD2 10 DAYS

%LYSIS

DAY 22

DAY 11

LOCD2- $\alpha$  SERUM CONCENTRATION  
CYNOMOLGUS MONKEY 1992

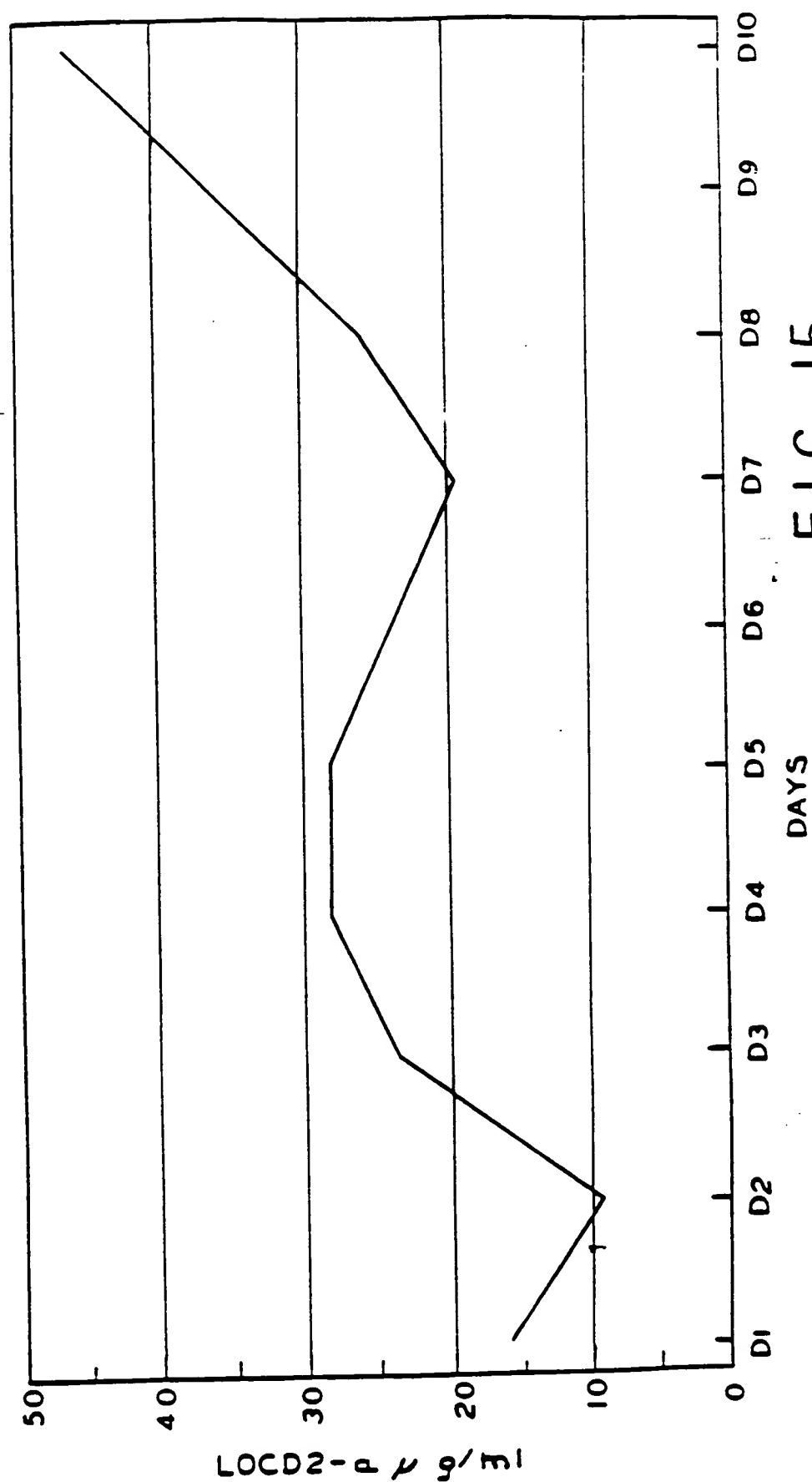


FIG. 15

**19G ANTIBODY ANTI-LOCD2α  
CYNOMOLGUS MONKEY**

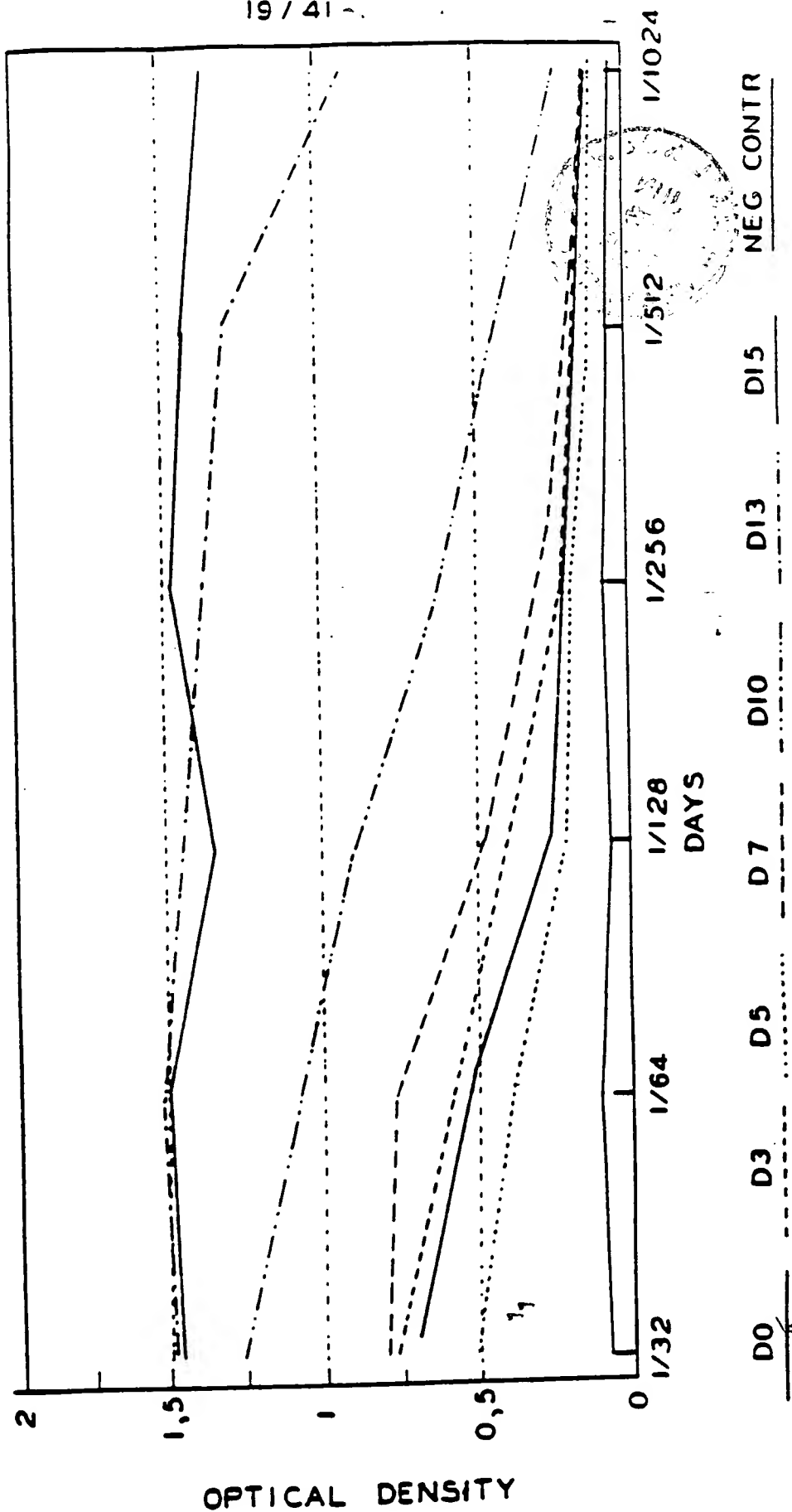


FIG. 17B  
LO-CD2- $\alpha$ : SERIC DOSAGES

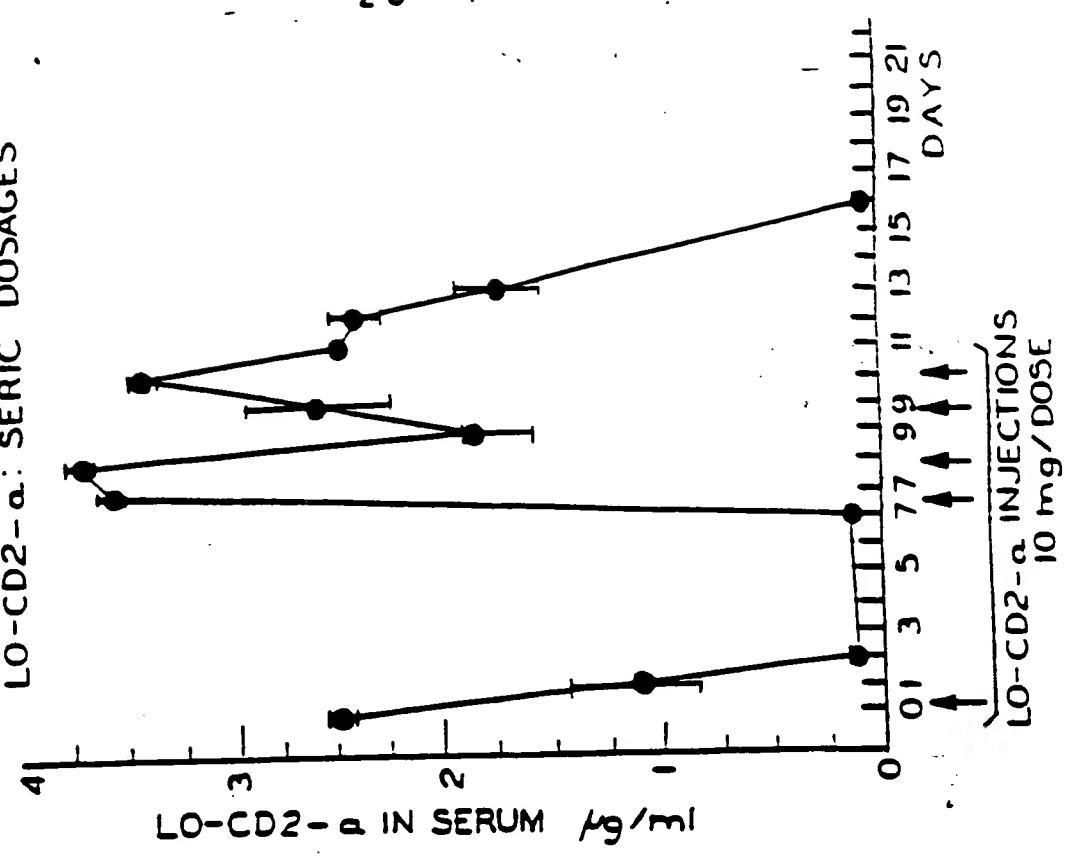


FIG. 17A  
PHENOTYPICAL MARKERS

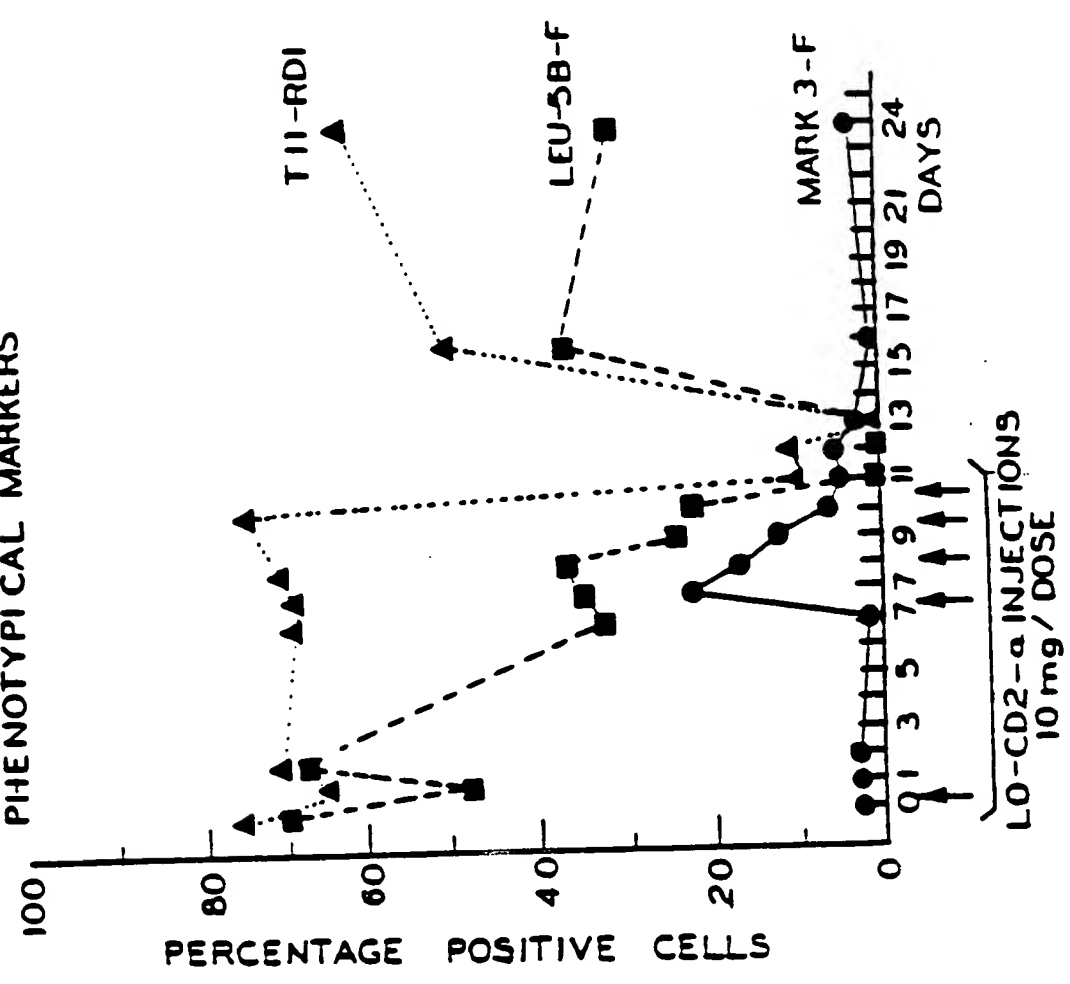


FIG. 18B

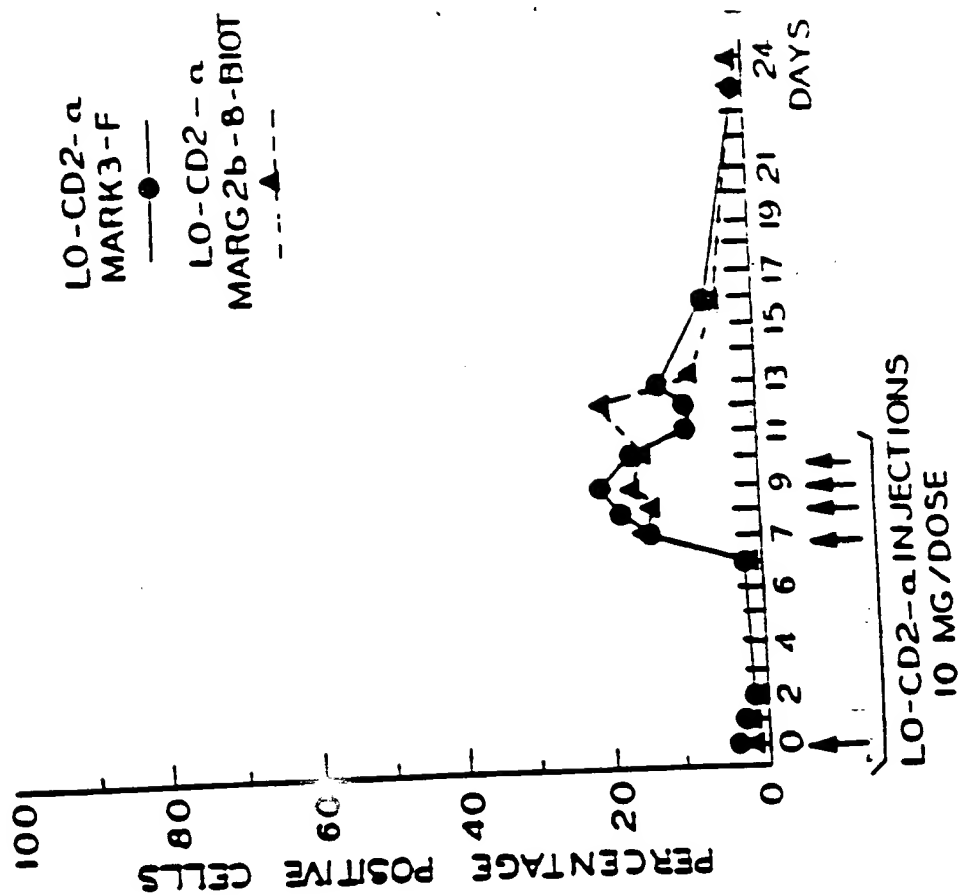
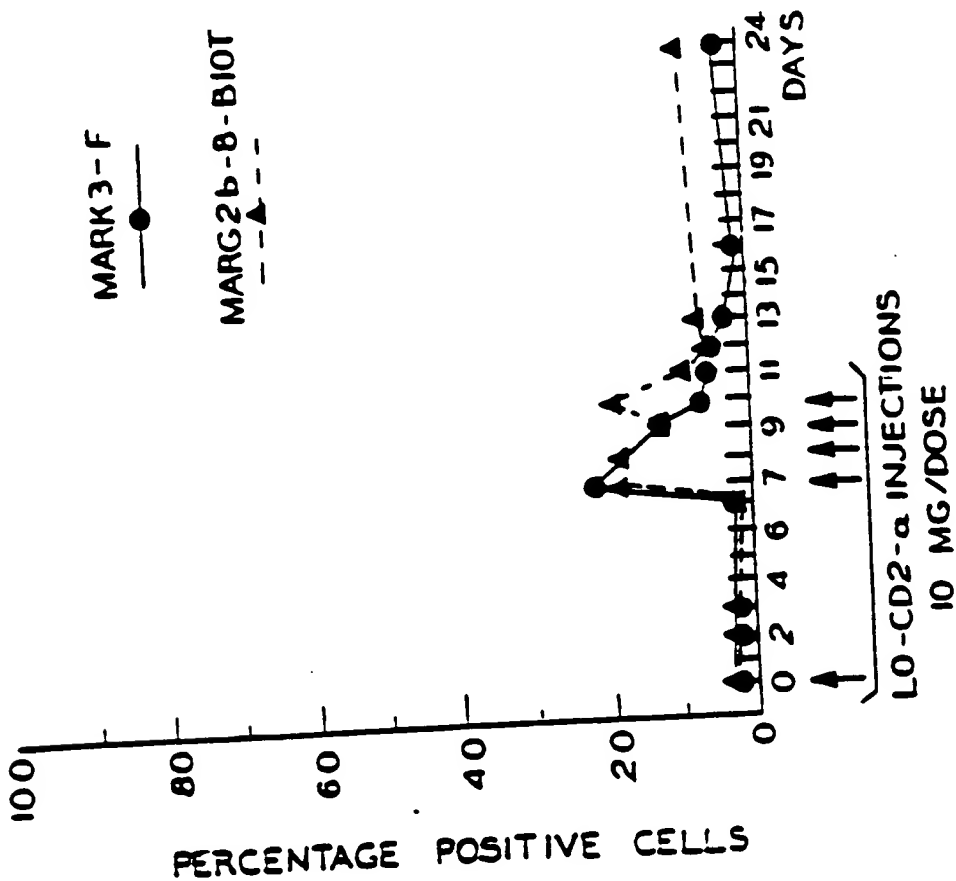
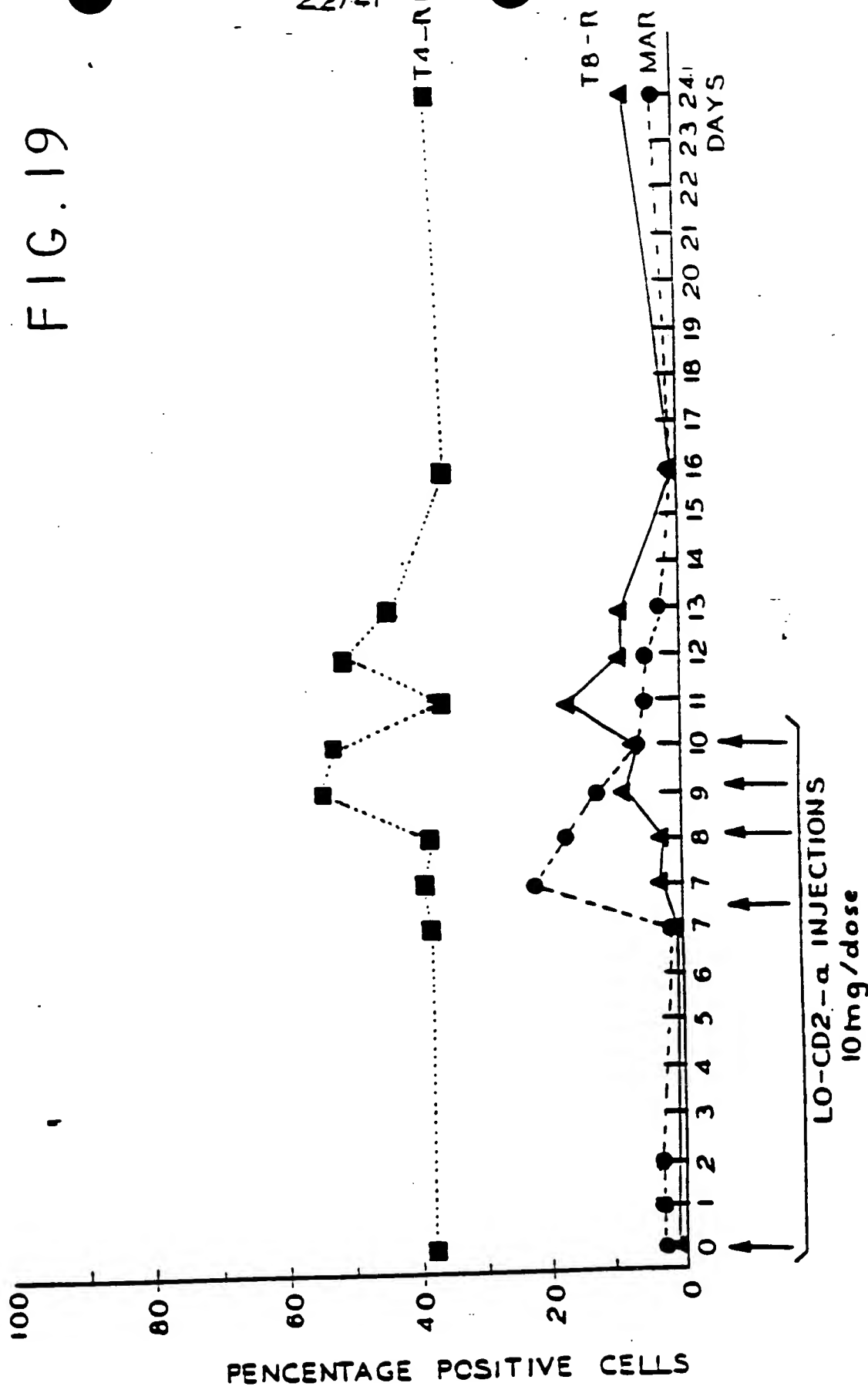


FIG. 18A



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FIG. 19



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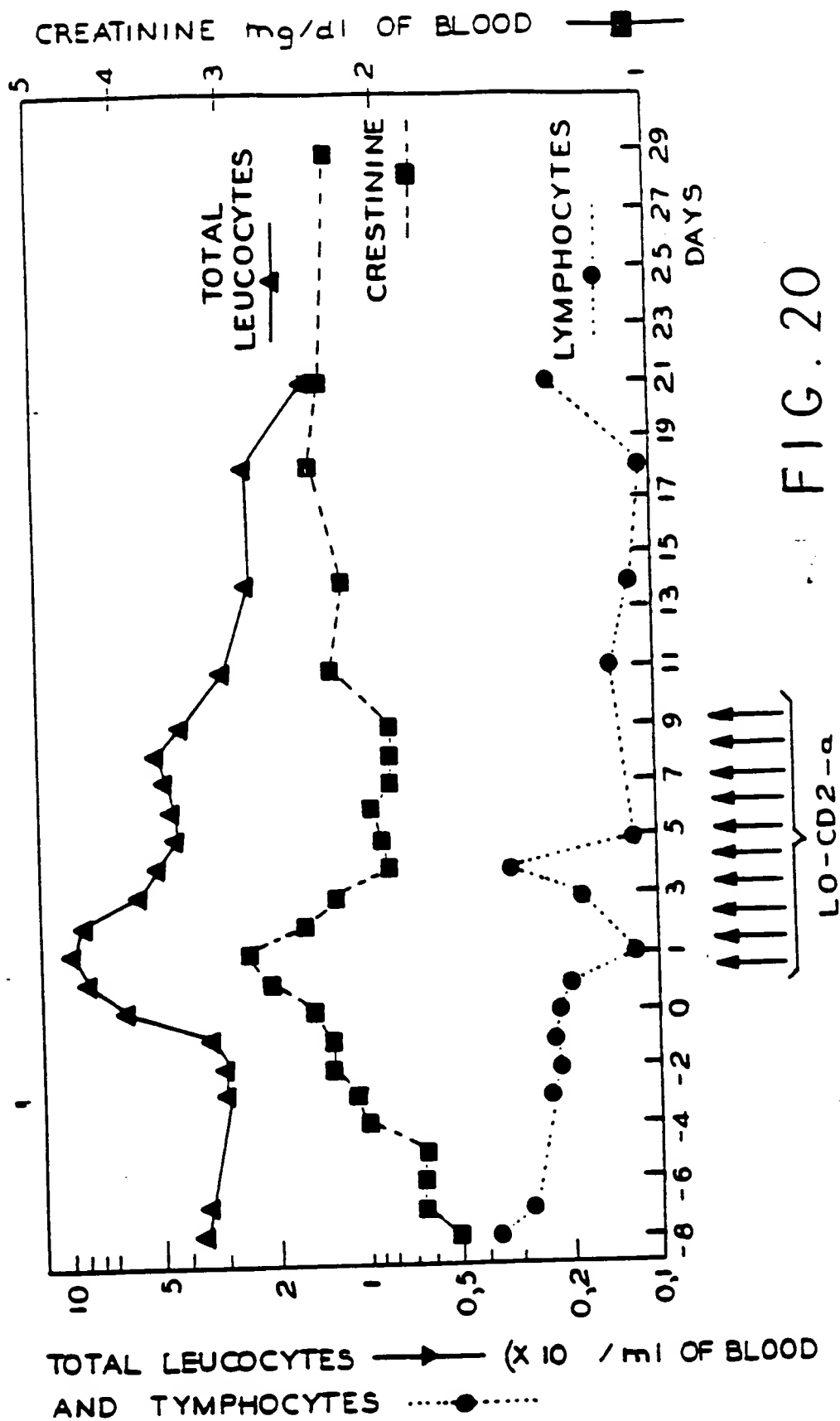


FIG. 20

LO-CD2- $\alpha$  IN KIDNEY ALLOGRAFT REJECTION

FIG. 21

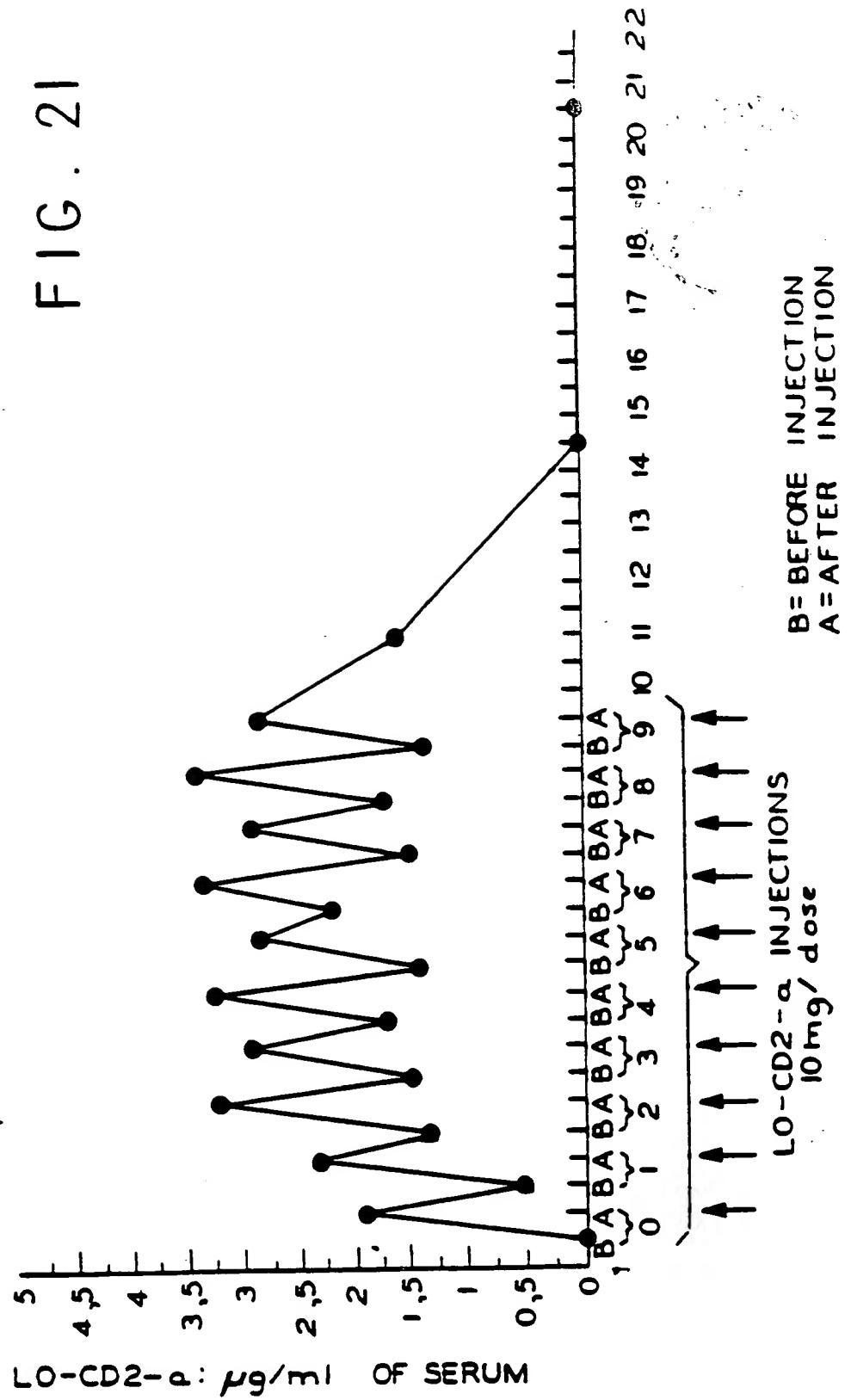




FIG. 22

CREATININ VALUES  
PATIENT 2 AR.A.

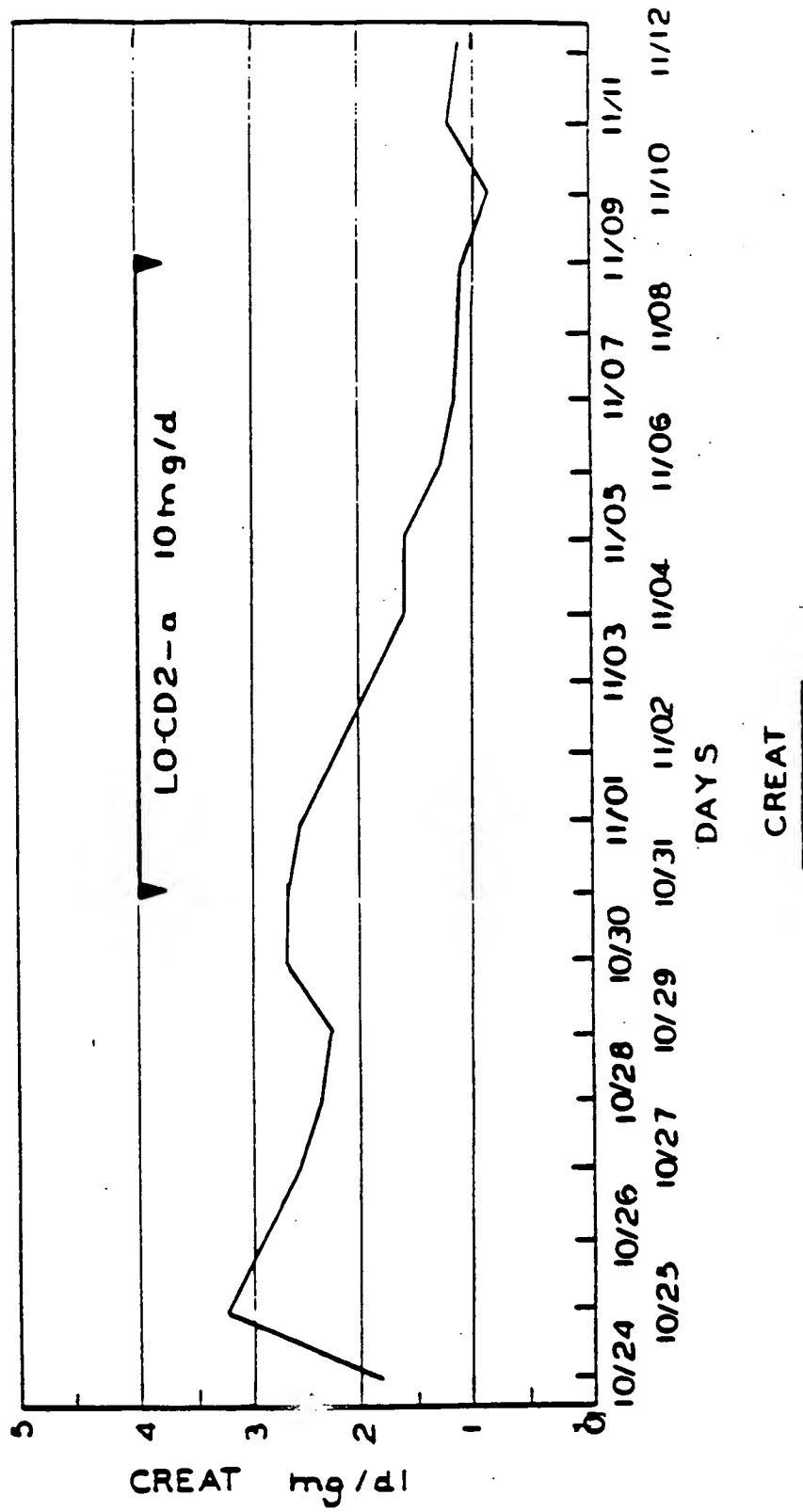
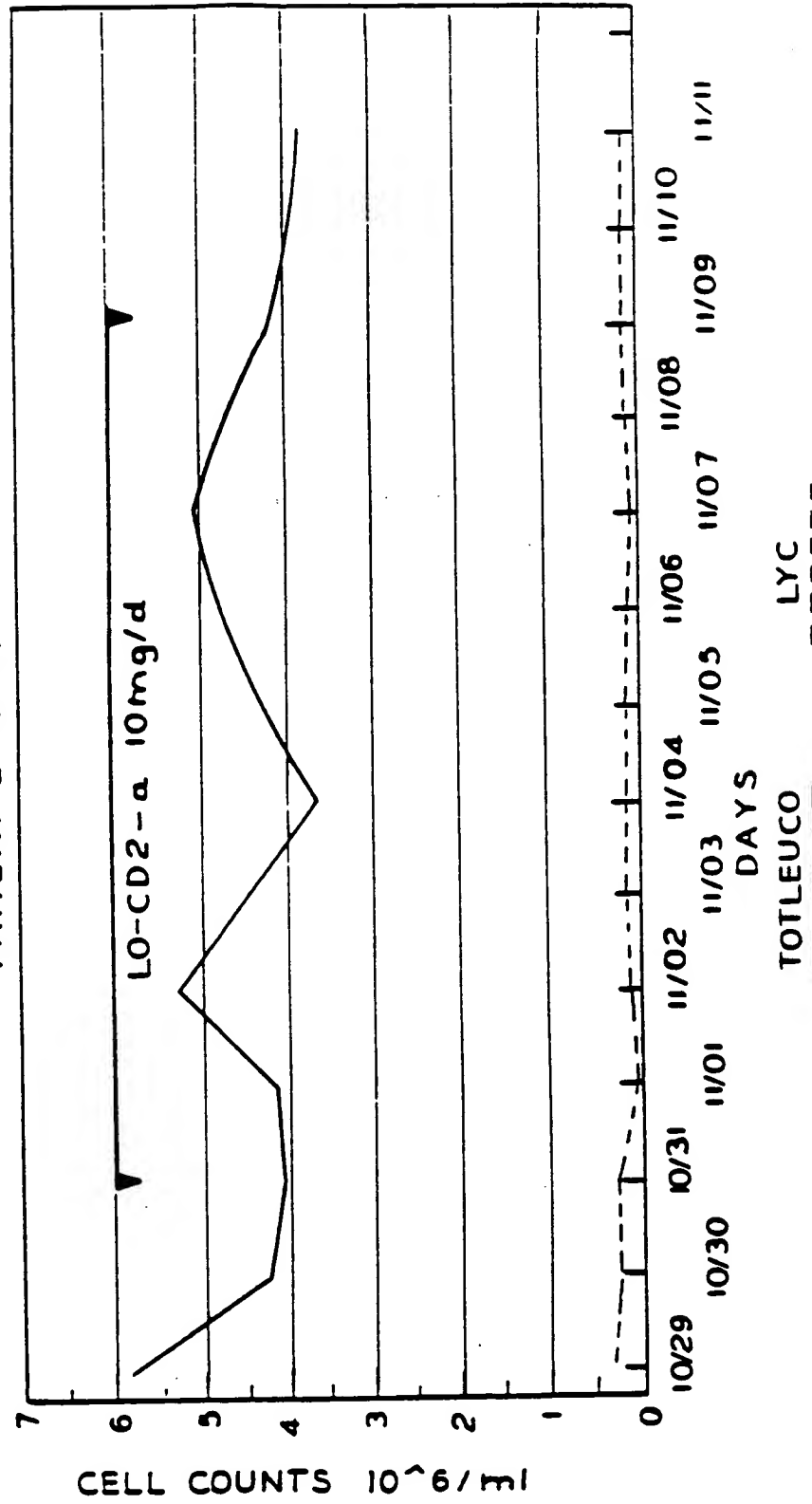
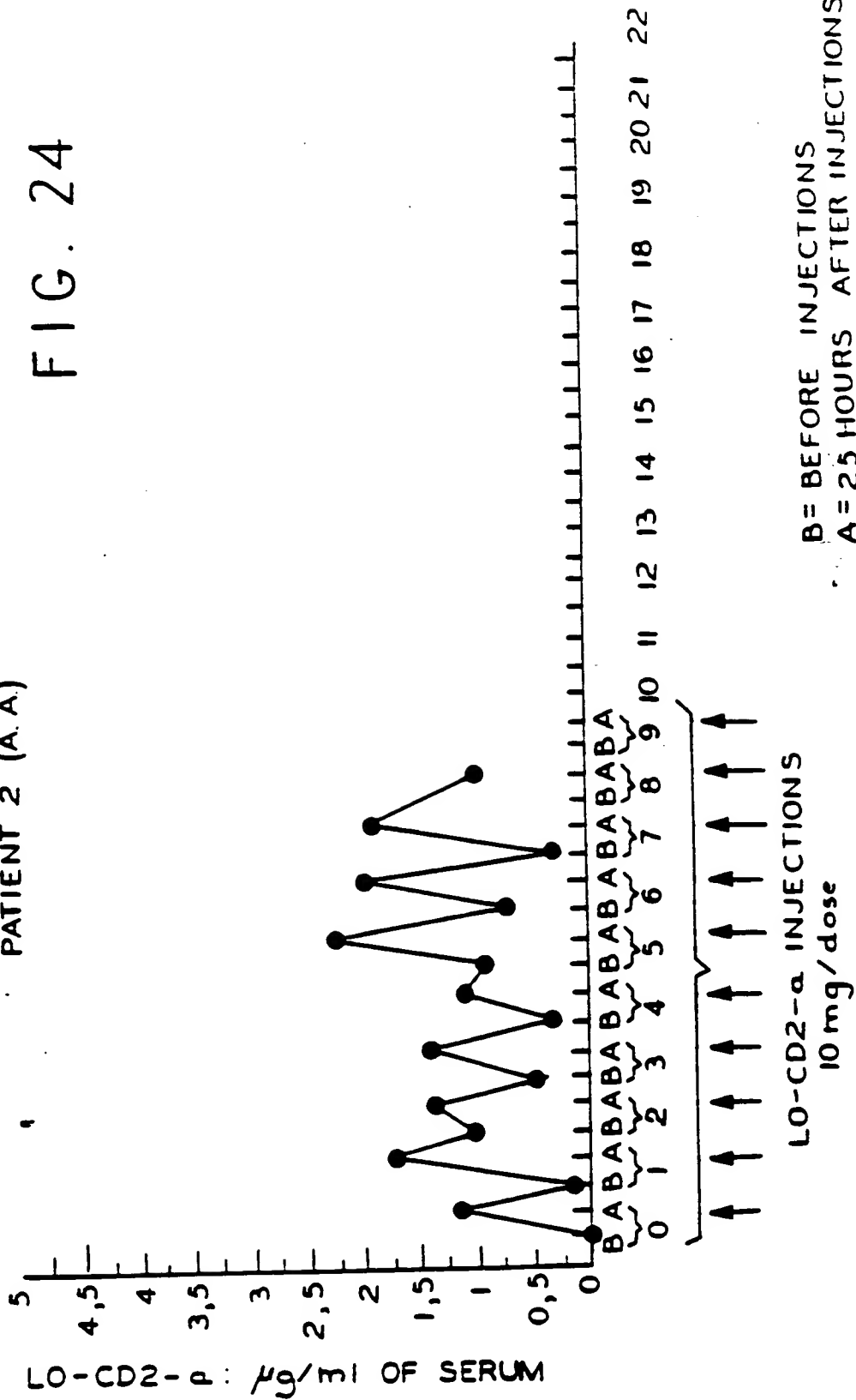


FIG. 23

LEUCOCYTE COUNTS  
PATIENT 2 AR.A.

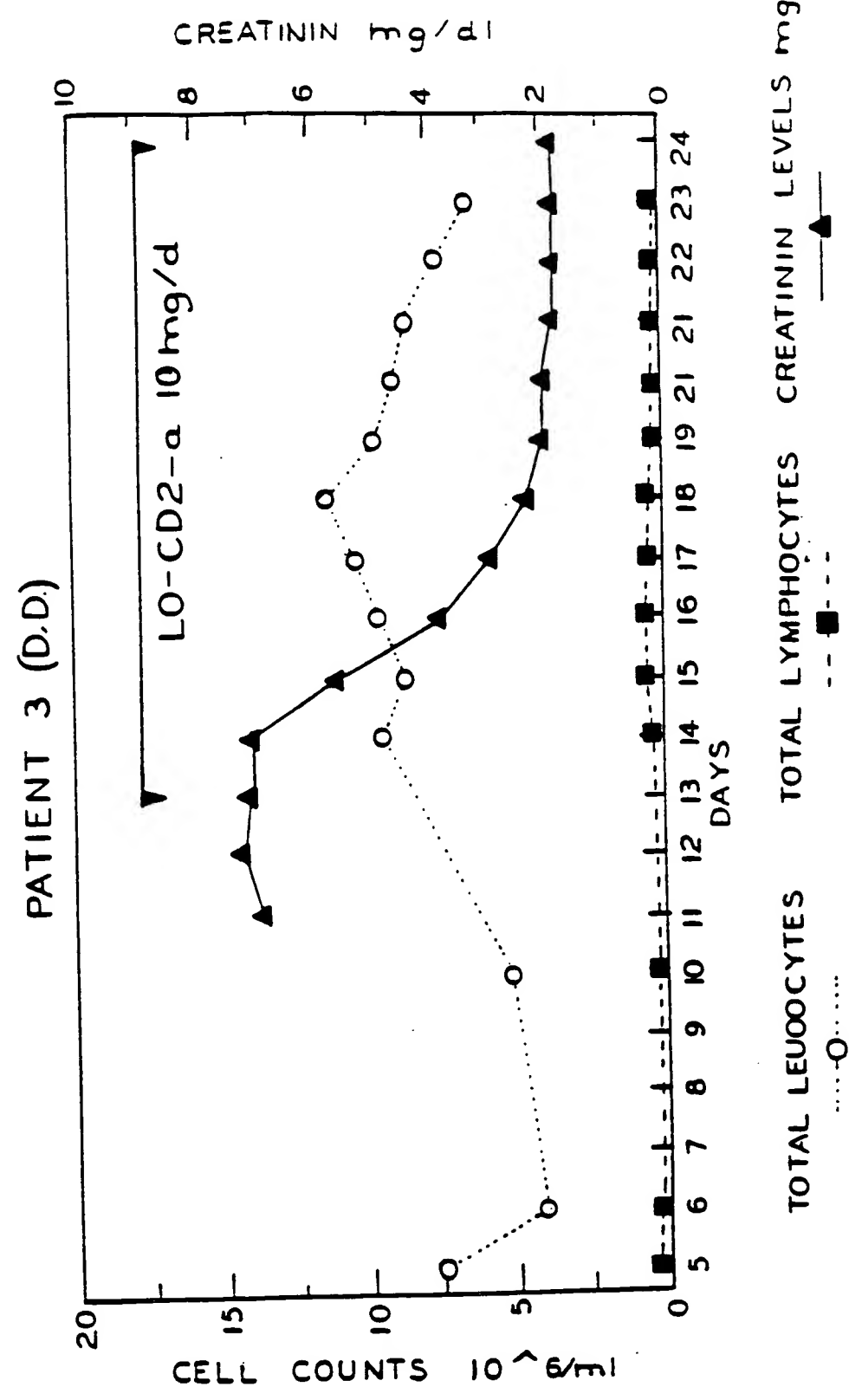


LO-CD2- $\alpha$  IN KIDNEY ALLOGRAFT REJECTION  
PATIENT 2 (A.A.)



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FIG. 25



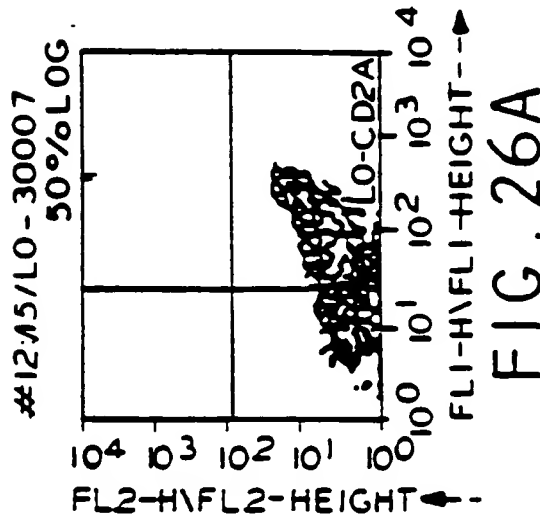


FIG. 26A

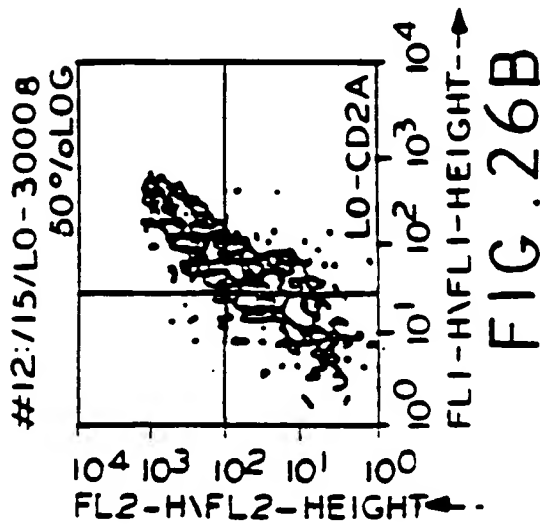


FIG. 26B

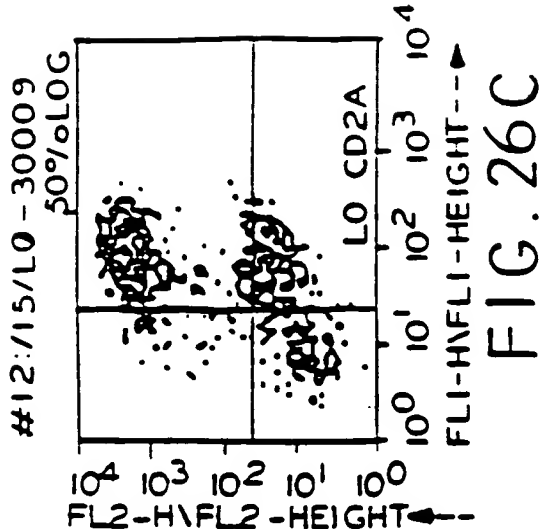


FIG. 26C

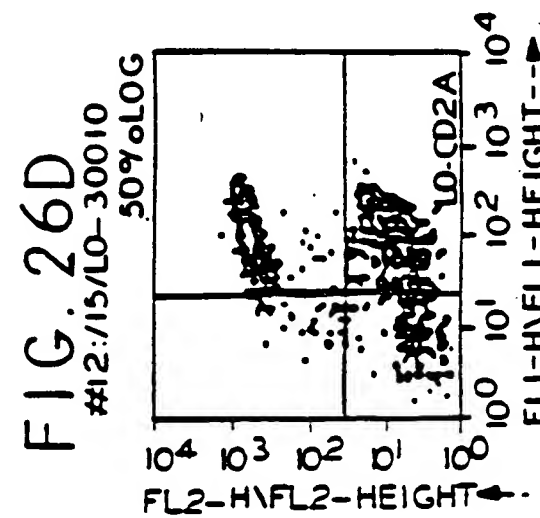


FIG. 26D

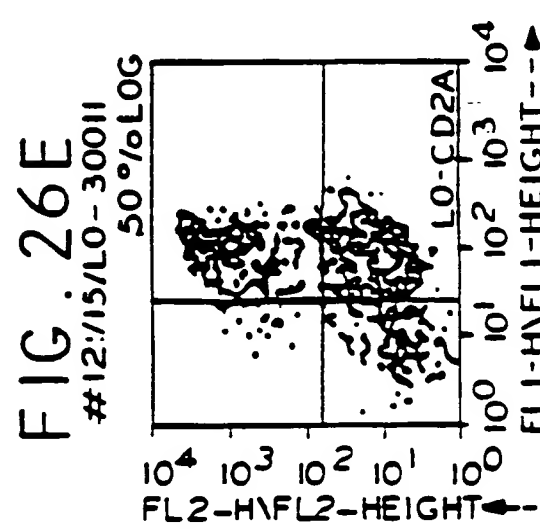


FIG. 26E

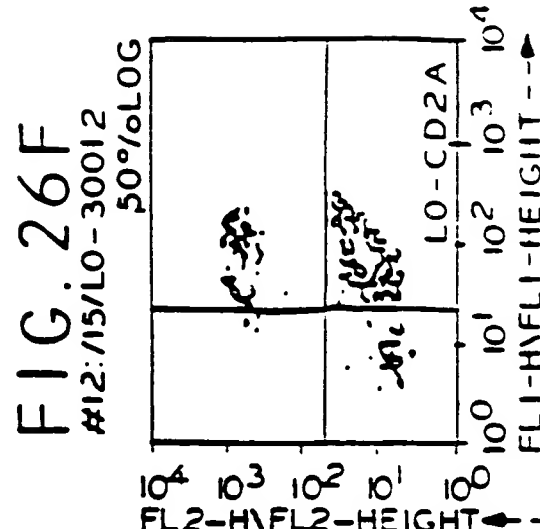


FIG. 26F

SINGLE STAINED CONTROLS

## SINGLE STAINED CONTROLS

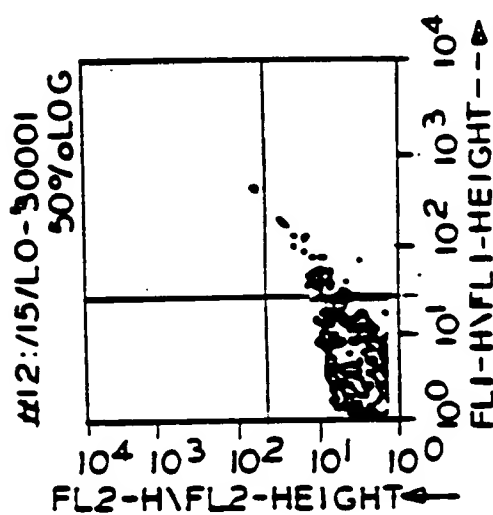


FIG. 26J

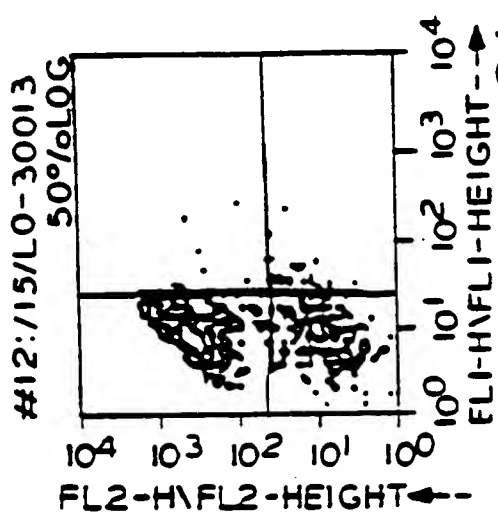


FIG. 26K

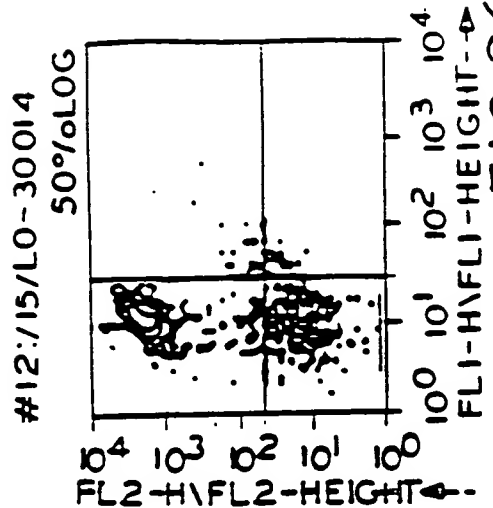


FIG. 26L

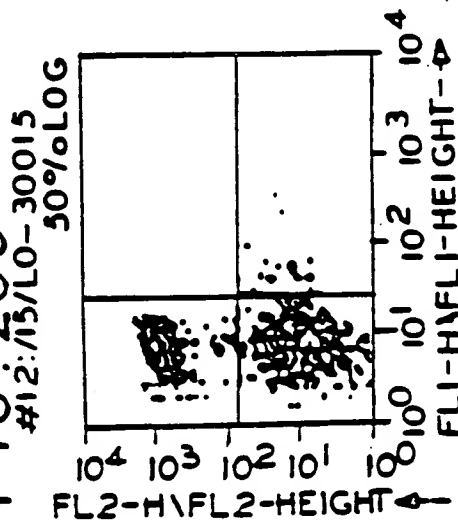


FIG. 26J

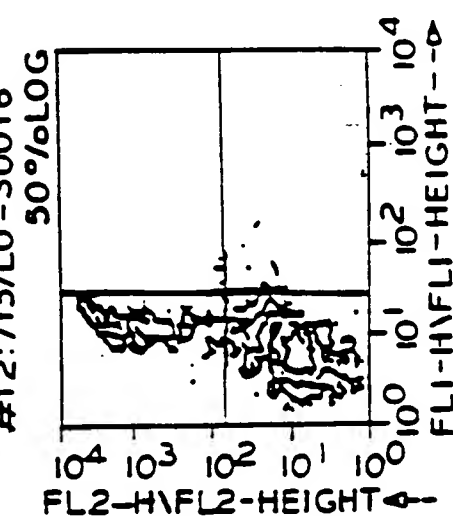


FIG. 26K

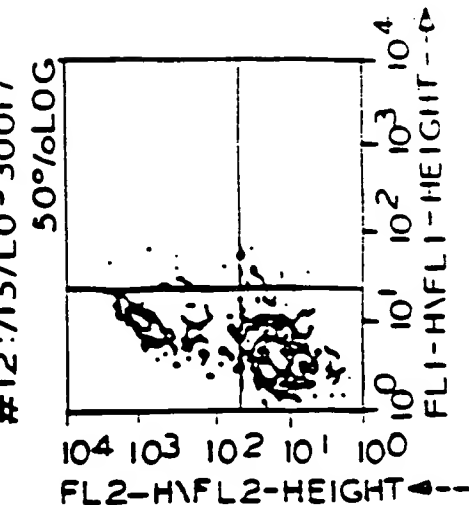


FIG. 26L

FIG. 26I

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FIG. 27A

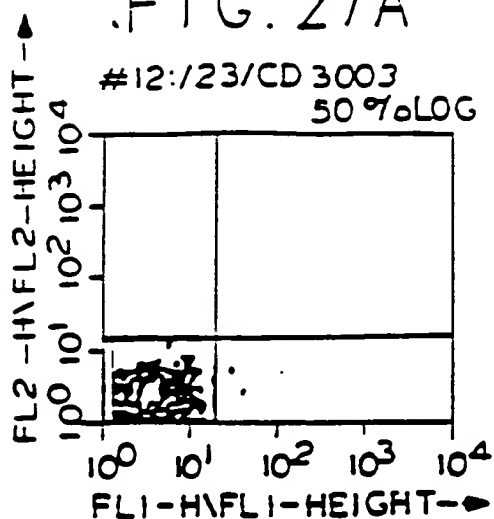


FIG. 27B

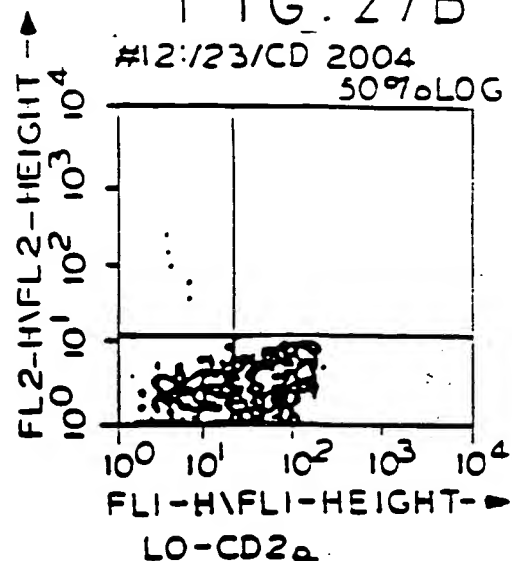


FIG. 27C

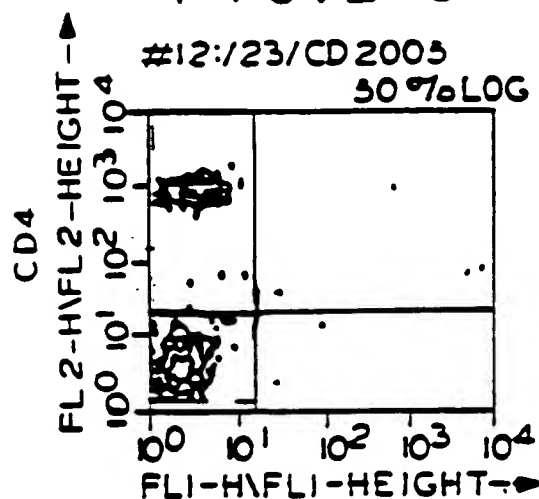


FIG. 27D

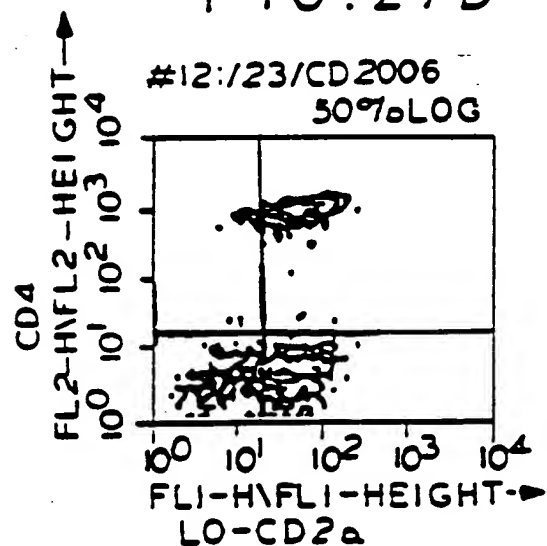


FIG. 27E

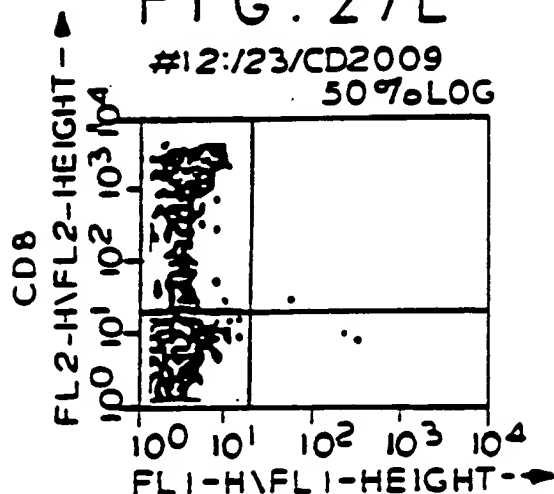


FIG. 27F

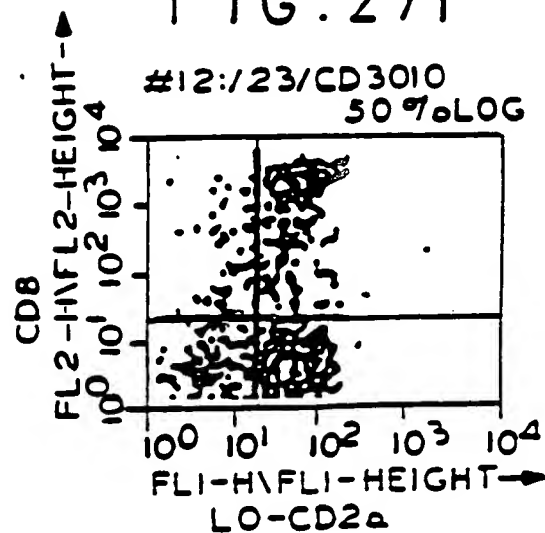


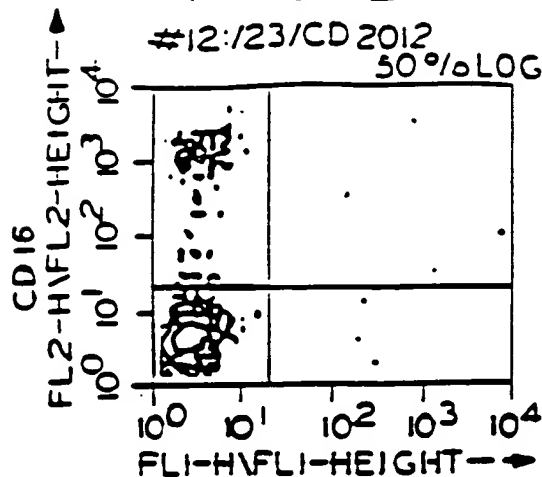
FIG. 27G <sup>32/41</sup>

FIG. 27H

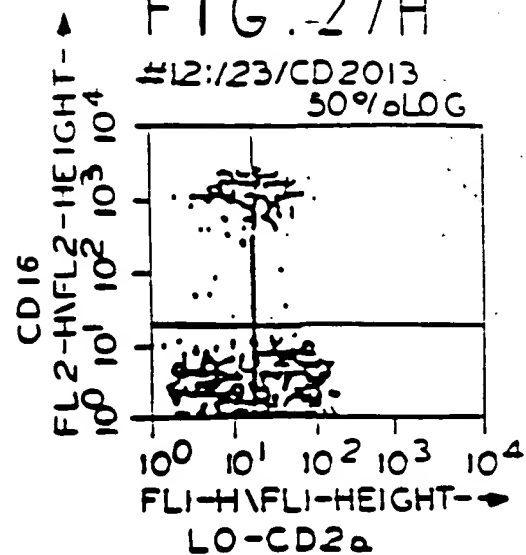


FIG. 27I

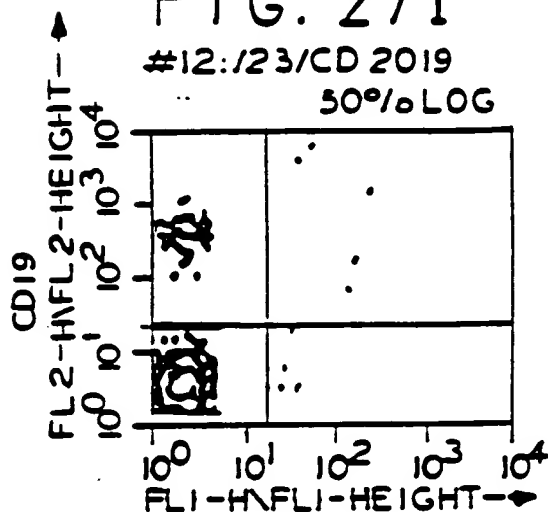


FIG. 27J

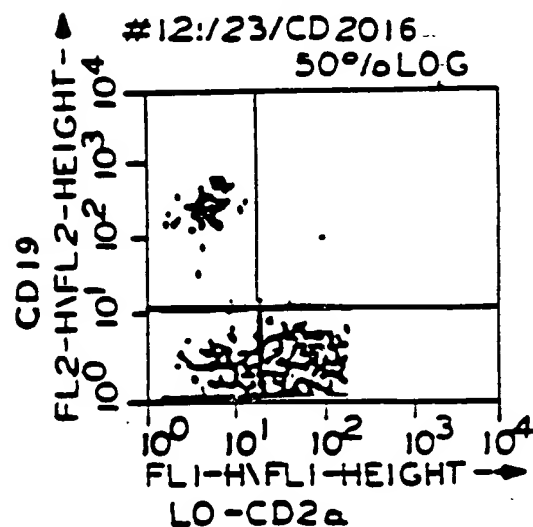


FIG. 27K

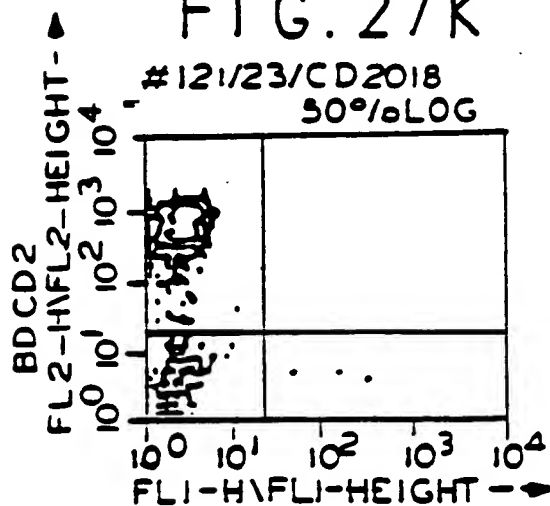


FIG. 27L

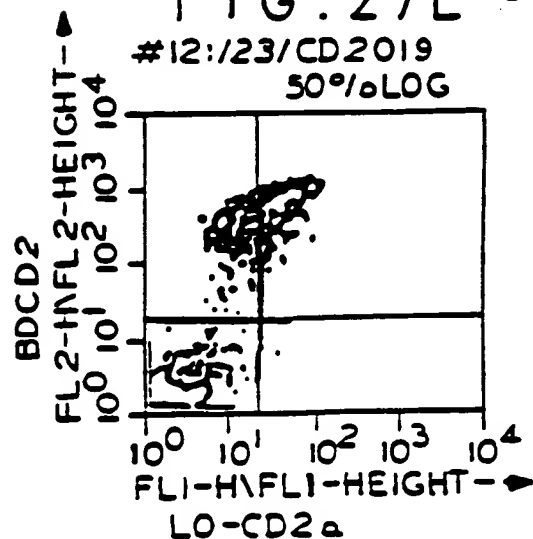




FIG. 28A

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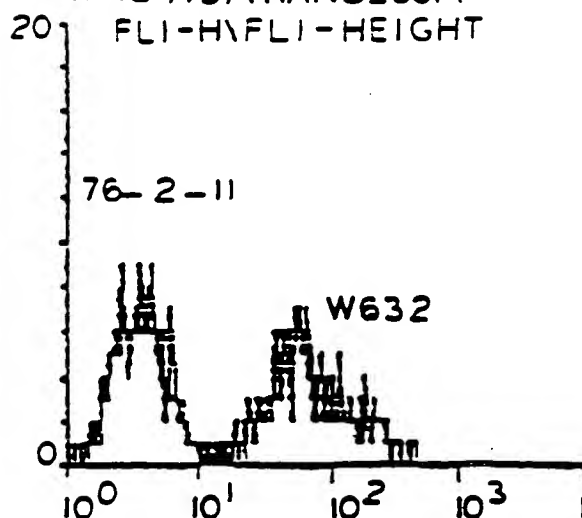
#12:/13/TRANS2001\  
FLI-H\FLI-HEIGHT

FIG. 28B

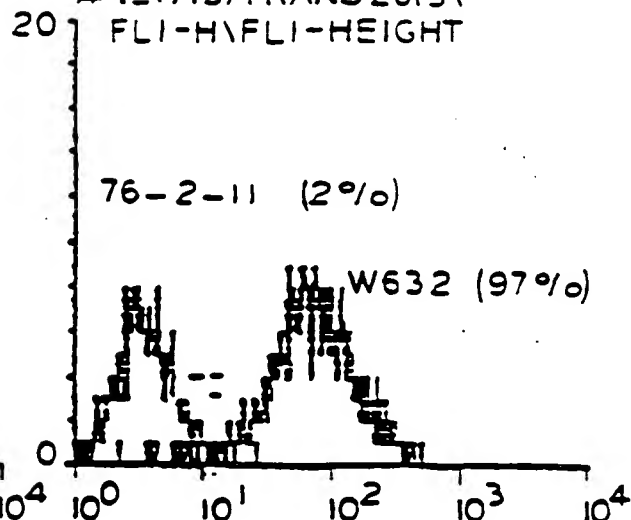
#12:/13/TRANS2013\  
FLI-H\FLI-HEIGHT

FIG. 28C

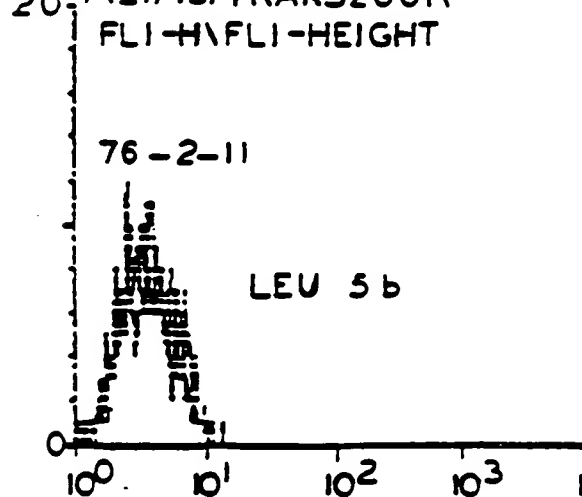
#12:/13/TRANS2001\  
FLI-H\FLI-HEIGHT

FIG. 28D

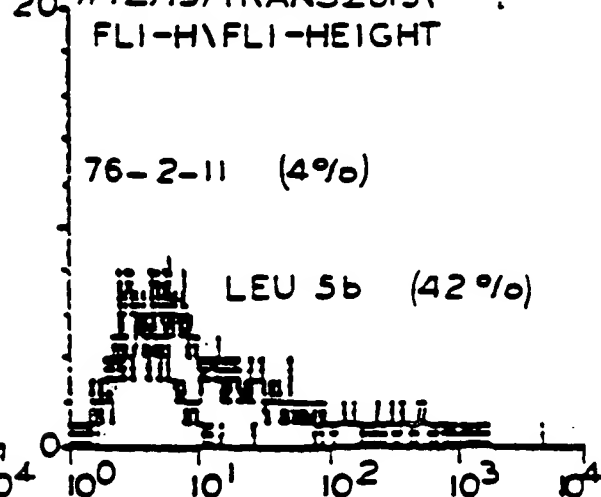
#12:/13/TRANS2013\  
FLI-H\FLI-HEIGHT

FIG. 28F

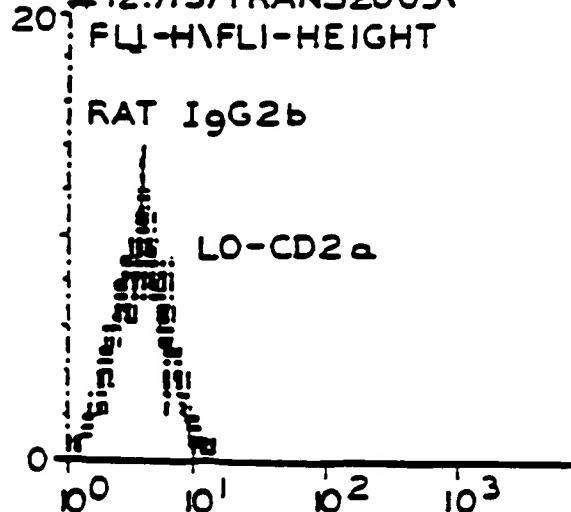
#12:/13/TRANS2005\  
FLI-H\FLI-HEIGHT

FIG. 28F

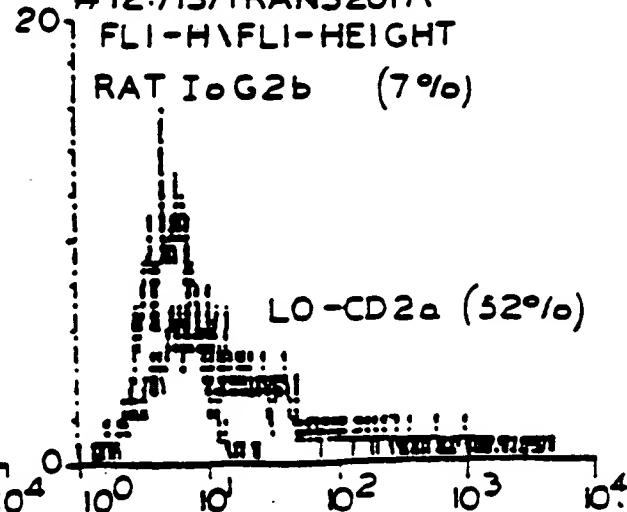
#12:/13/TRANS2017\  
FLI-H\FLI-HEIGHT  
RAT IgG2b (7%)

Fig-29

# LoCD2a VH + Native Leader Sequence

Sequence Range: 1 to 491

23/477989

10 20 30 40 50 60 70 80 90 100  
 \* \* \* \* \*  
 ATGAATGACAGTGATCATCCTCTTCTTGATGACAGTAGCTACAGAGTAAGGCACTCCCAAGTCCCTAACTTGAGAGATCATACCTTGGAGACAGTGA  
 M K C R W I I L F L M A V A T G>  
 -19  
 110 120 130 140 150 160 170 180 190 200  
 \* \* \* \* \*  
 CACTATCTTTGGATTCTTTCACAGGGTCACTCAGAGTCCAGCTGCAGCAATCTGGCTGAGCTTCAGAGACCCGGGCTCAGTCAAGTTGTCG  
 V N S E V Q L Q Q S G P E L Q R P G A S V K L S>  
 210 220 230 240 250 260 270 280 290 300  
 \* \* \* \* \*  
 TGCAAGGCTTCTGGCTATATATTACAGAACTACTATAGTACTGGTGAAGCAGAGGCTTAACAGAGGCTGAAATTAGTAGAAGATCGATCCTGAAG  
 C K A S G Y I F T E Y Y M Y W V K Q R P K Q G L E L V G R I D P E>  
 310 320 330 340 350 360 370 380 390 400  
 \* \* \* \* \*  
 ACGTAGTATTGATTATGTGAGAGTTCAAAAGAGGCAACAGGCTGAGTACATCGTCCACACAGCCTACATGCAACTCAGCAGCCTGACATC  
 D G S I D Y V E K F K K A T L T A D T S S N T A Y M Q L S S L T S>  
 410 420 430 440 450 460 470 480 490  
 \* \* \* \* \*  
 TGAGACACAGCAACTATTTTGTGCTAGGGGAAATTCACACTATCGATTGTGCTTACTGGGCCAAGCACCCTCGTCACAGTCTCTCA  
 E D T A T Y F C A R G K F N Y R F A Y W G Q G T L V T V S S>  
 90 180 110 50 20

Figure 30

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**Light Chain Variable Region Sequences of rat LO-CD2a,  
human HUM5400, and humanized LO-CD2a**

	FR 1	CDR 1	FR 2
	*   *   20	30   40 **	*   *
Rat LO-CD2a Vk	DVVLTTQTPPT LLATIGQSVS	ISCRSSQSLL HSSGNTYLNW	LLQRTGQSPQ
Humanized Vk	---M--S--S --V-L--PA-	-----	---P-----
Human HUM5400 Vk	---M--S-LS -PV-L--PA-	-----V Y-D--H--	FQ--P--R

	CDR 2	FR 3	CDR 3
	*   60   70	80   *   90	100
Rat LO-CD2a Vk	PLIYLVSKLE SGVFNRFSGS	GSGTDFTLKI SGVEAEDLGV	YYCMQFTHYP
Humanized Vk	-----D-----	-----V--	-----
Human HUM5400 Vk	R---K--NRD ---D-----	-----R-----V--	-----G--W-

	FR 4
	110
Rat LO-CD2a Vk	YTFGAGTKLE LK
Humanized Vk	----Q----- I-
Human HUM5400 Vk	----Q----- I-

Sequence Range: 1 to 807

\* \* \* \* \*  
 10 20 30 40 50 60 70 80 90 100  
 AAGCTTCATGATGAGTCTGTCCAGTCCCTGTTCTCGTTATTCGCTTGGATTCTGGTAAGTAGAGAATGAGTTACAGGACAAGAAATGGGGATGGAGGAT  
 M M S P V Q S L F L L L L W I L G>

*	110	*	120	*	130	*	140	*	150	*	160	*	170	*	180	*	190	*	200
GAGTTC	TGACTG	CCCCAT	GTTGGC	TGTCCAT	GTTGGTGA	AGGCAGG	TCTTA	TTTTCT	TAAGATG	GCACACTT	GAGATTCC	ATTACCTTG	AATAATG	AGAAATTAC					

	210	220	230	240	250	260	270	280	290	300
*	*	*	*	*	*	*	*	*	*	*
ACATGAGATAGGA	TTTGTGCTAAGAGGATTCTAATGTA	TGAGAAGGTGTA	TGCCA	TTTAGGA	TCTGC	A	CCGA	ATTGTTTTGTGAAAAAGCATTTTGCT		

\* 310 \* 320 \* 330 \* 340 \* 350 \* 360 \* 370 \* 380 \* 390 \* 400  
 ATATTTTATAAATCAGAAACACACCCGGGATCTCAGGAAATGAGTAAACAAAAGTAAATTCACAAAGATTGGTTGCAAAATTTTGCACATAAATCTTTGT

TCTGATCTATTATTAATTTTCAGGAACCAATGGTGATGTTGTGATGACCCAGAGTCCACCTTCATTATTGGTAACCTTGGGACCAACCCAGCTTCCATCTCTTG

\* \* \* \* \*  
 510 520 530 540 550 560 570 580 590 600  
 CAGGTCAAGTCAGAGTCTCTTACATAGTAGTGGAACACCTATTGTTGCTACAGAGGCCAGGCCAAATCTCCACAGCCGCTAAATTTATTTGGTA  
 R S S Q S L L H S S G N T Y L N W L L Q R P G Q S P Q P L I Y L V>

\* 610 \* 620 \* 630 \* 640 \* 650 \* 660 \* 670 \* 680 \* 690 \* 700  
 TCCAAACTGGAACTCTGGGGTCCCGACAGGTTTCAGTGGCTCAGGAGTGGAAACAGATTTCACACTCAAAATCAGTGGAGTGGAAAGCTGAGGATGTGGGGG  
 S K L E S G V P D R F S S G S G S G T D F T L K I S G V E E A E D V G>

[illegible]

✱

TGGATCC

Fig 32

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**Heavy Chain Variable Region Sequences of rat LO-CD2a,  
human Amu 5-3, and humanized LO-CD2a**

	FR 1				CDR 1		FR 2	
	10	20	30	40	50			
Rat LO-CD2a Vh	EVQLQQSGPE	LQRPASVKL	SCKASGYIFT	EYYMYWVKQR	PKQGLELVGR			
Humanized Vh	Q---V---A-	VKK-----V	-----T--	-----R-A	-G-----M--			
Human Amu 5-3 Vh	Q---V---A-	VKK-----V	-----T--	G---H--R-A	-G-----WM--			

	CDR 2		FR 3		
	60	80	90	100	
Rat LO-CD2a Vh	IDPEDGSIDY	VEKPKKKATL	TADTSSNTAY	MLSSLTSED	TATYFCARGK
Humanized Vh	-----V--	-----S---	-E-----D-	--V-Y-----	
Human Amu 5-3 Vh	-N-NS-GTN-	AQ--QGRV-M	-R---IS---	-E--R-R-D-	--V-Y----R

	CDR 3	FR 4
	110	
Rat LO-CD2a Vh	FNYR/////FAYWGQ	GTLVTVSS
Humanized Vh	-----	-----
Human Amu 5-3 Vh	TE-IVVAEG-D----	-----

*Fig. 33*

10	20	30	40	50	60	70	80	90	100
* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
AAGCTTCATGA	AAATGCAGGTGG	ATCATCCTCTCT	TCCTTCATGG	CAGTAGCTAC	AGGTAAAGCACT	CCCAAGTCCT	AAACTTGAG	AGATCATAC	ACTTGGGAG
M K C R W I I L F L M A V A T G>									
110	120	130	140	150	160	170	180	190	200
* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
ACAGTGACACT	ATCTTTGGATT	CTTTCAACAGG	GTCAACTCAC	AGGTGCAGCT	TGGTGCAGT	CTGGGGCTG	AGGTGAAGA	AGCCCTGGG	CCCTCAGTGAA
V N S Q V Q L V Q S G A E V K K P G A S V K>									
210	220	230	240	250	260	270	280	290	300
* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
GGTCTCCTGCA	AGGCTTCGGAT	ACACCCITTC	ACCGAGTACT	ATATGTACT	TGGTGCAGC	AGCCCTGG	ACAAGGGCT	TGAGCTGAT	GGGAAGGATCGAT
V S C K A S G Y T F T E Y Y M Y W V R Q A P G Q G L E L M G R I D>									
310	320	330	340	350	360	370	380	390	400
* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
CCTGAAGACGG	TAGTATTGTT	ATGTTGAGAA	AGTTTAAGAA	AAAGTGAC	CCCTGACCG	CTGACACG	CTCTTAGC	ACAGCCCTAC	ATGGAGCTGAGCAGCC
P E D G S I D Y V E K F K K K F K K V T L T A D T S S S T A Y M E L S S>									
410	420	430	440	450	460	470	480	490	500
* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
TGACCTCTGAC	GACACGGCCG	TGTATTACT	GTGCGAGAG	GAAAGTTTA	ACTATAGGT	TGTTGCTT	ACTTGGG	CCCAAGGA	ACCCTGGTGACCGTCTCTCCTCAGG
L T S D D T A V Y Y C A R G K F N Y R F A Y W G Q G T L V T V S S>									
510	520	530	540	550	560	570	580	590	600
* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
TGAGTCCTTACA	ACCTCTCTCT	CTTCTATTTC	AGCTTAAATAG	ATTTTACT	GCATTTTGT	TGGGGGGA	AAATGTGT	GATCTGA	ATTTTCAGGTCATGAAGGACT
610	620	630	640	650	660	670	680	690	700
* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
AGGGACACCT	TGGGAGTC	AGAAAGGGT	CAATTGGG	AGCCCGGG	CTGATGC	CAGACAG	ACATCCT	CAGCTCCCG	GACTTCATGGCCAGAGATTTATAGGGATC

Fig. 34

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Binding of LO-CD2a and LO-CD2a Hu  
to Jurkat Cells

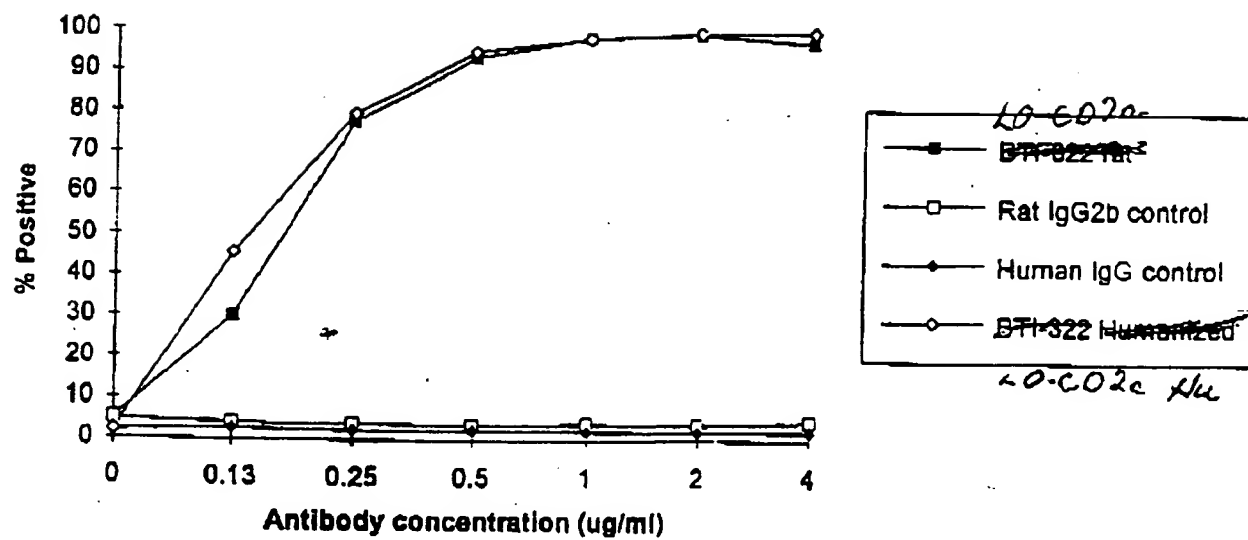


Fig. 35



# Induction of Hyporesponsiveness *in vitro*

Additions to primary MLR:

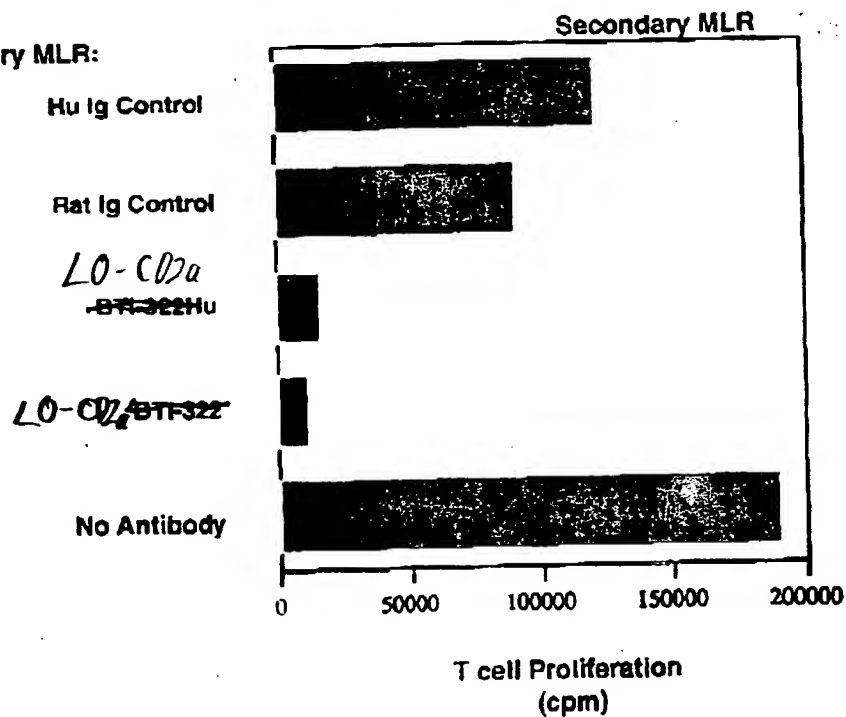


Fig. 3.6

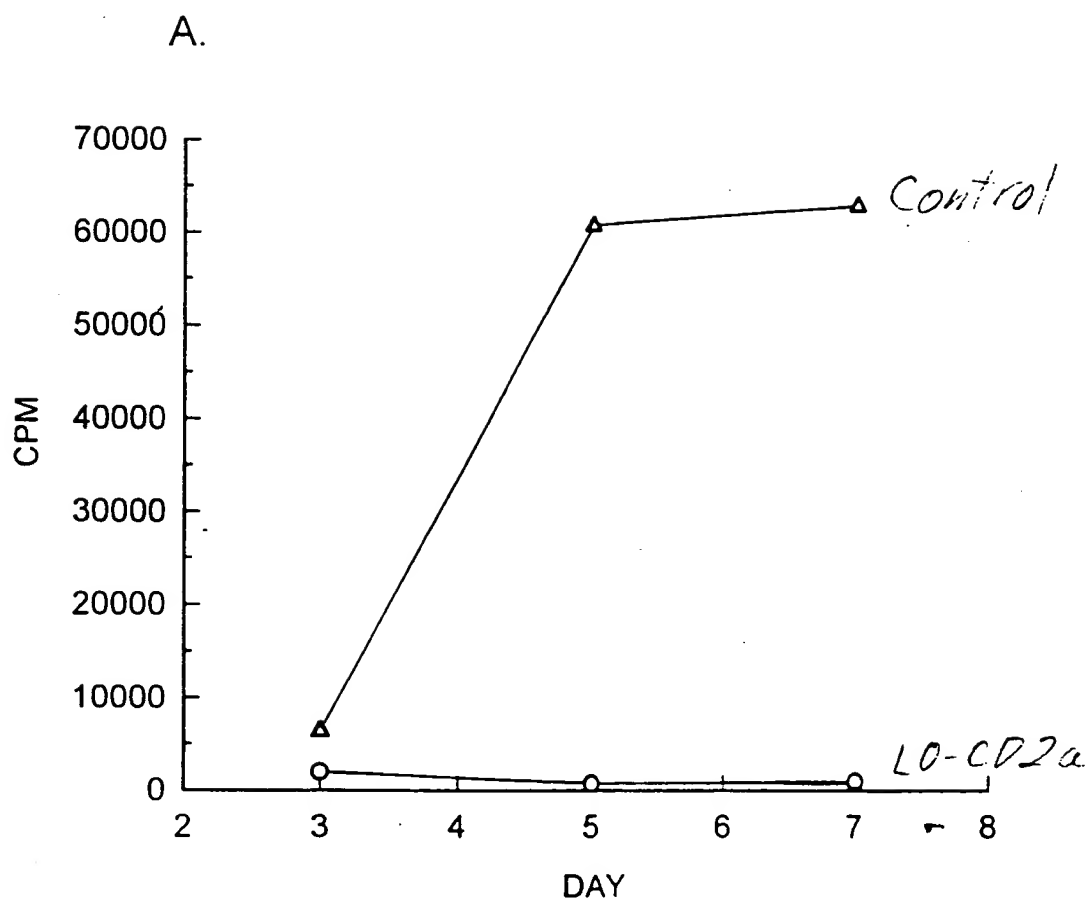
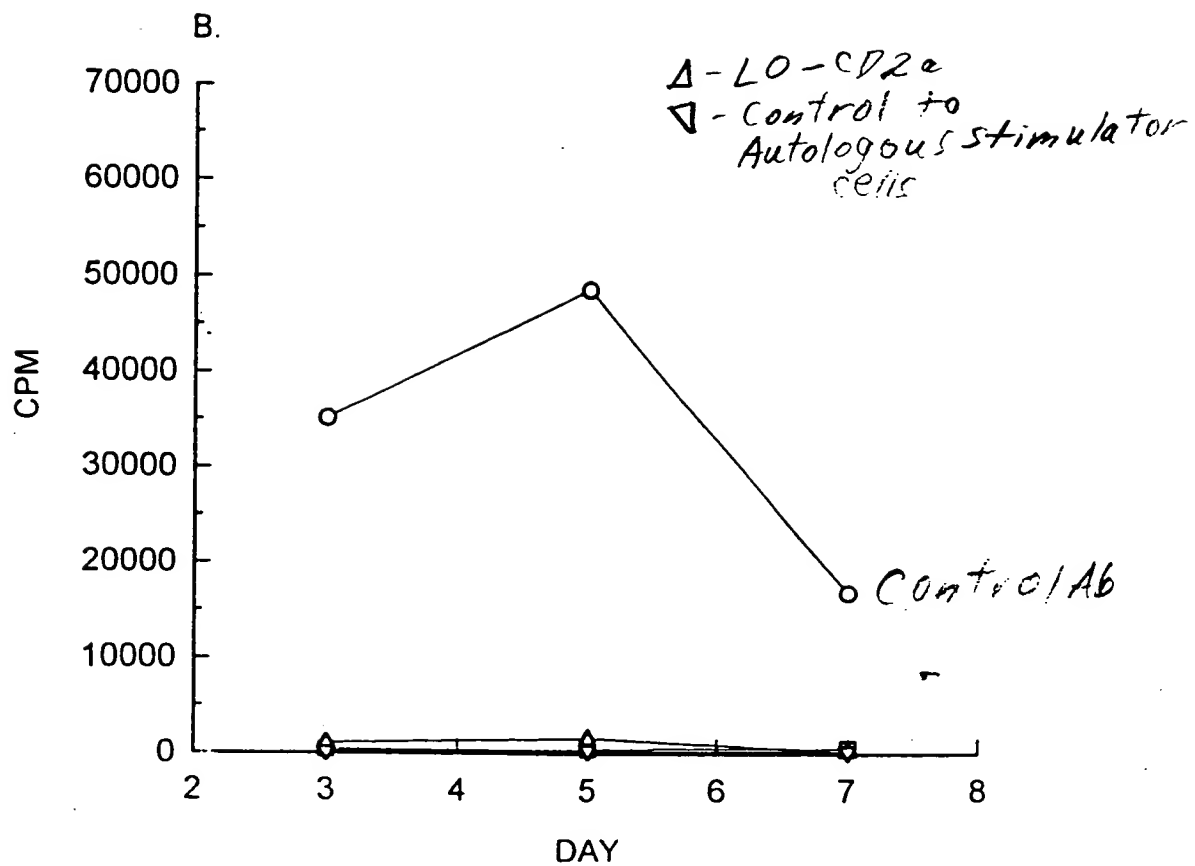


Fig. 37A



110 318

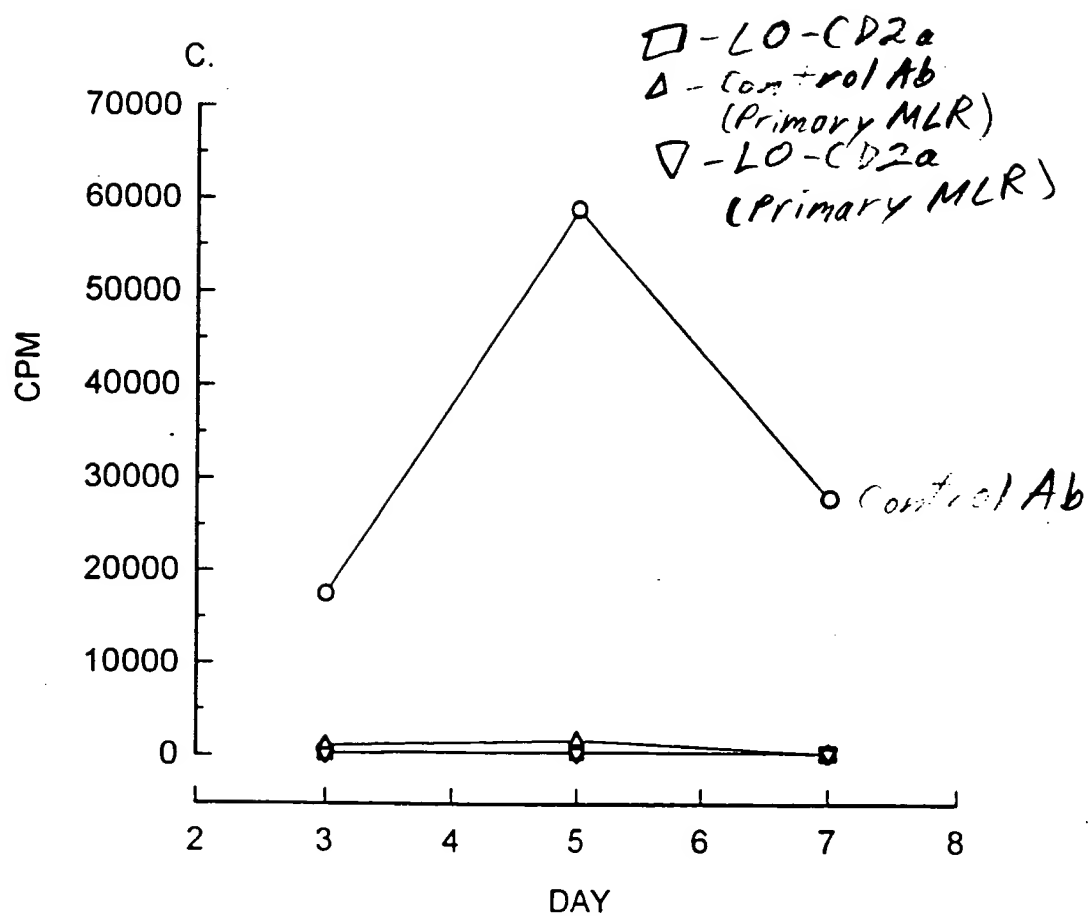


Fig. 37C

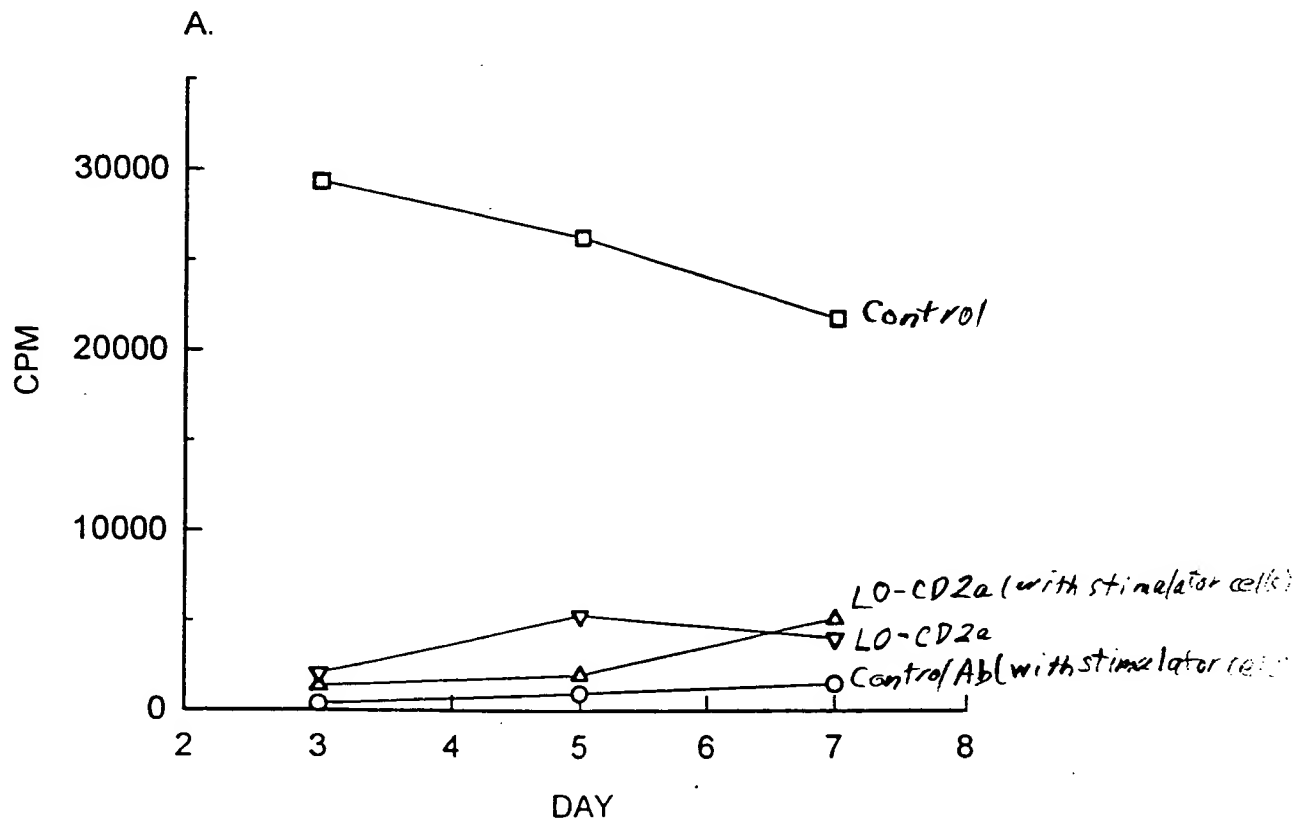


Fig. 38A

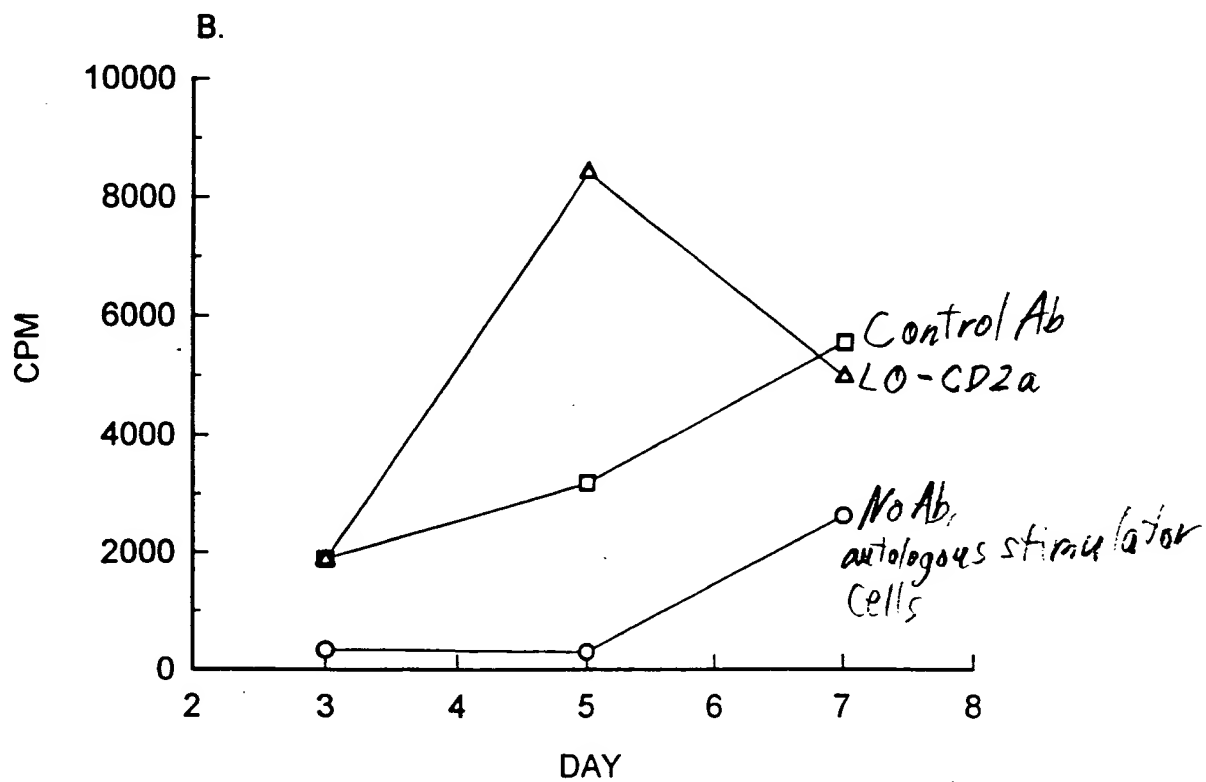


Fig. 38B

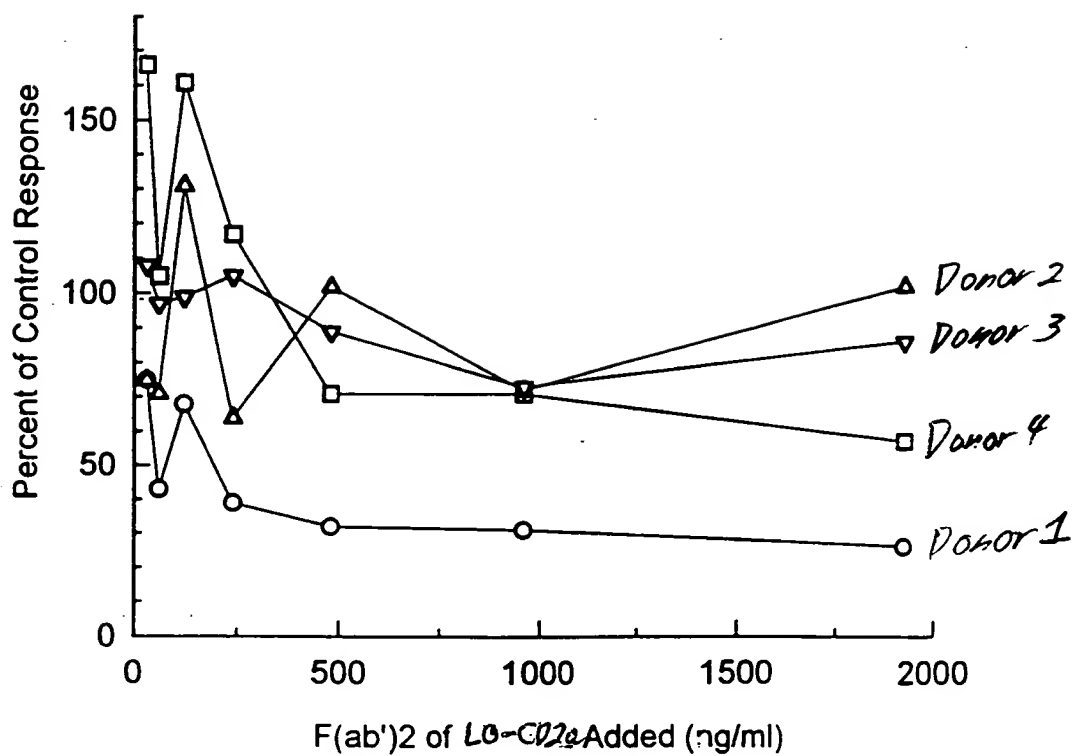


Fig. 39

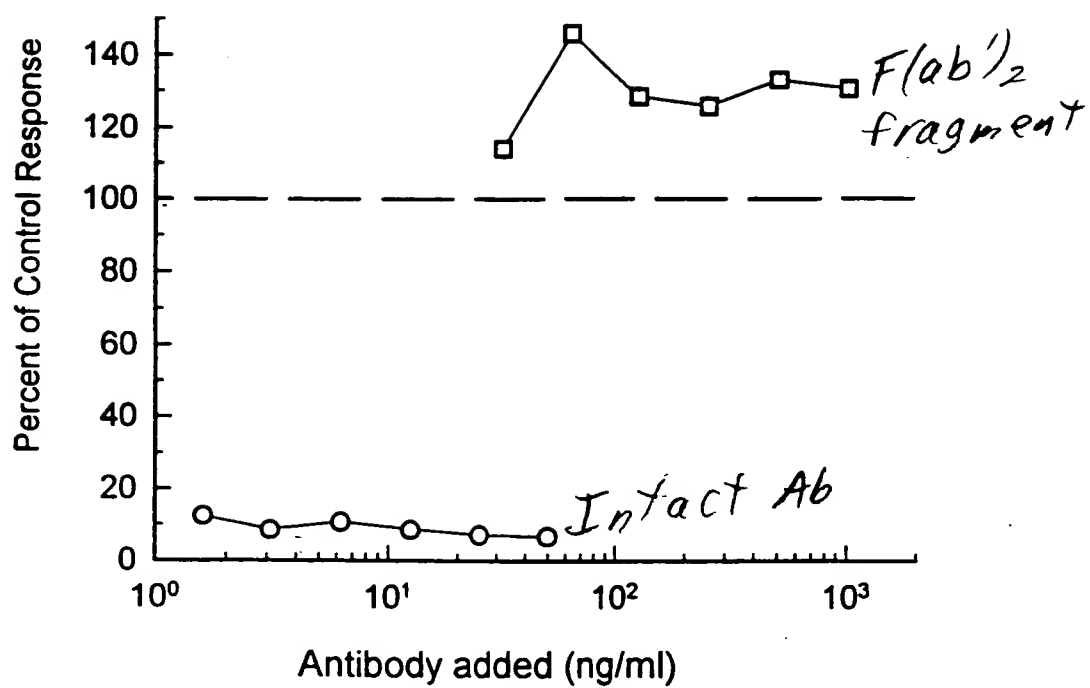


Fig. 40



7

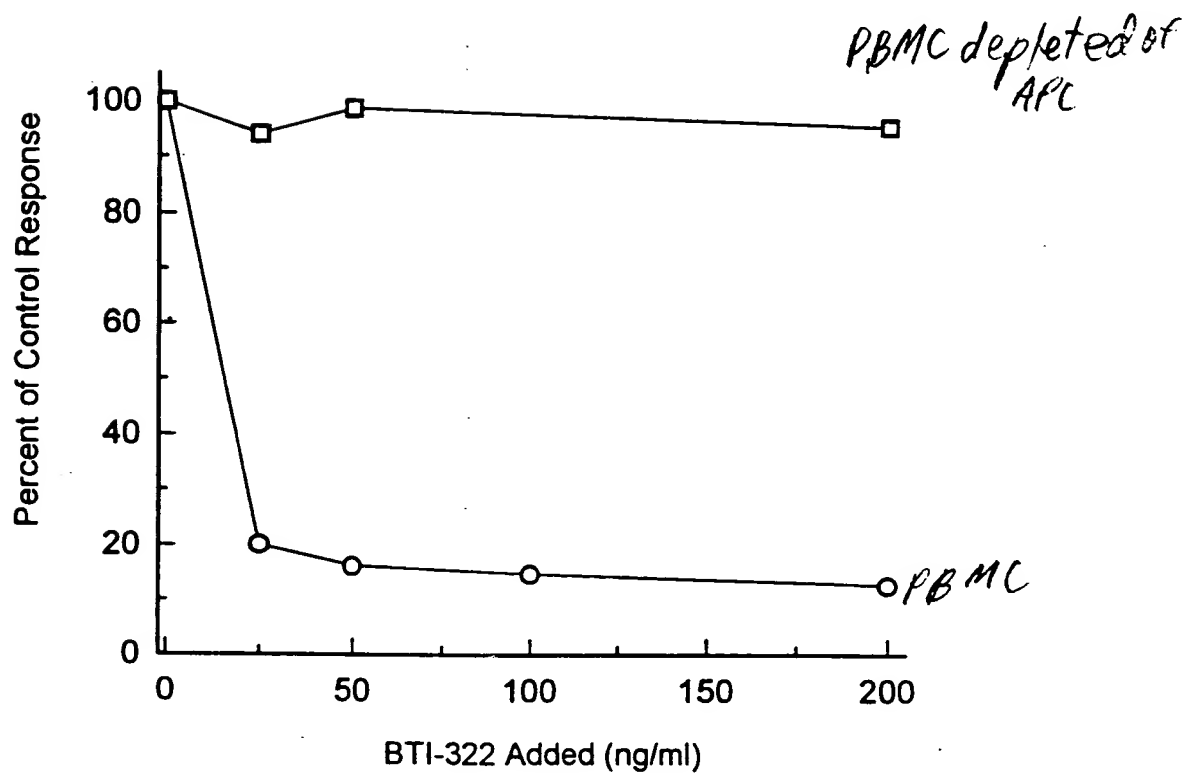


Fig. 41